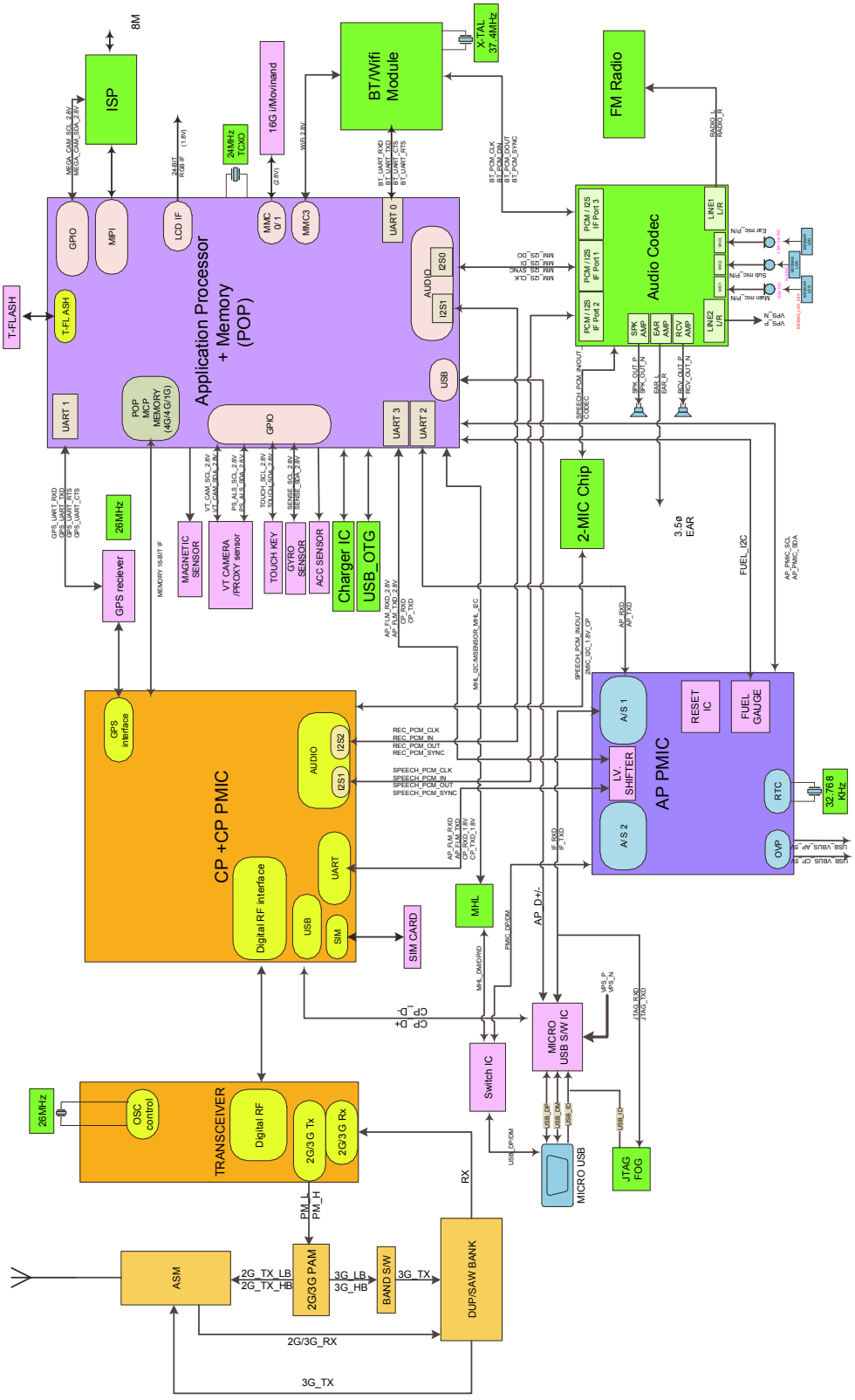
8. Level 3 Repair

8-1. Block Diagram



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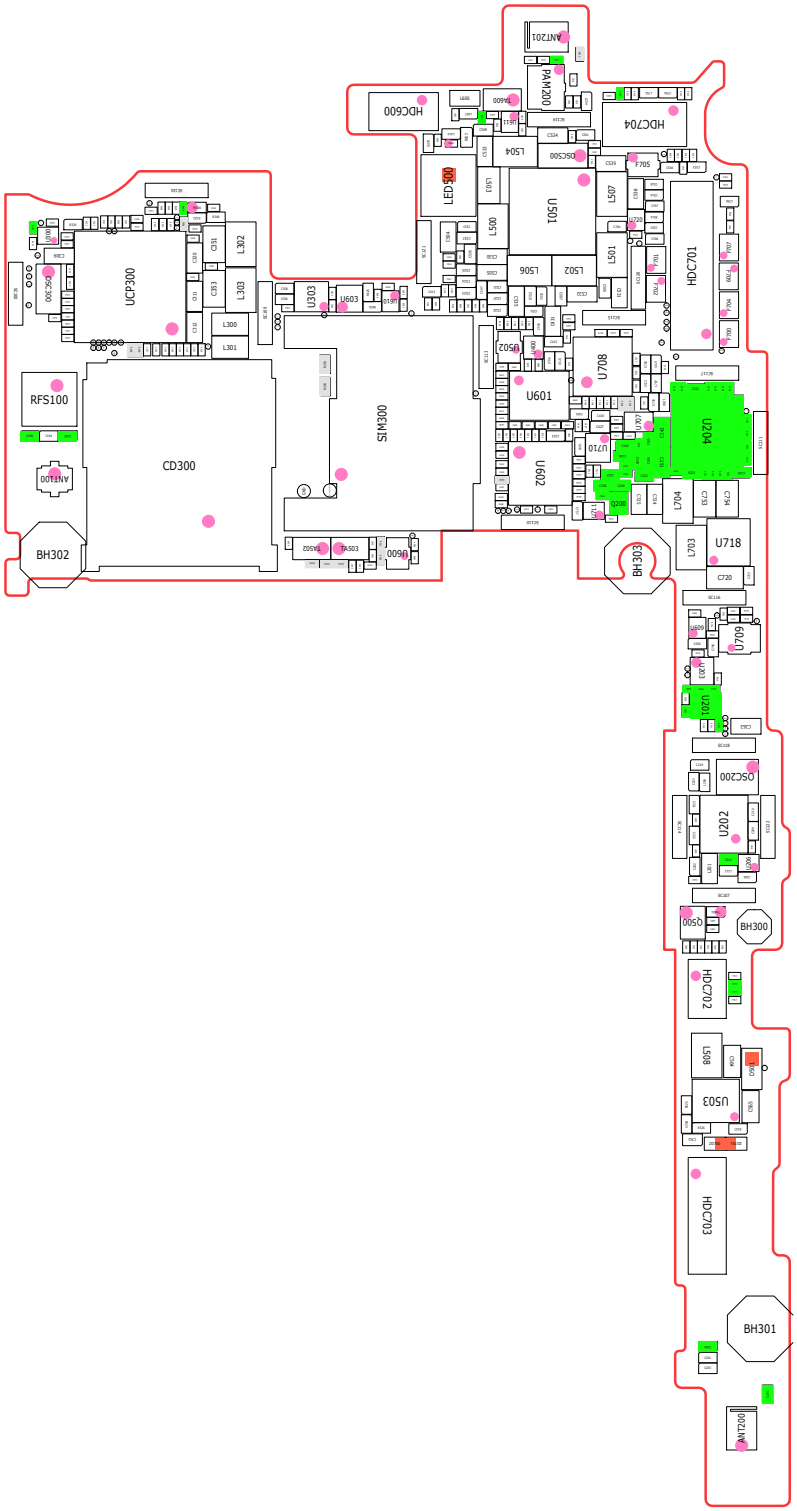
8-2. PCB Diagrams

8-2-1. Top



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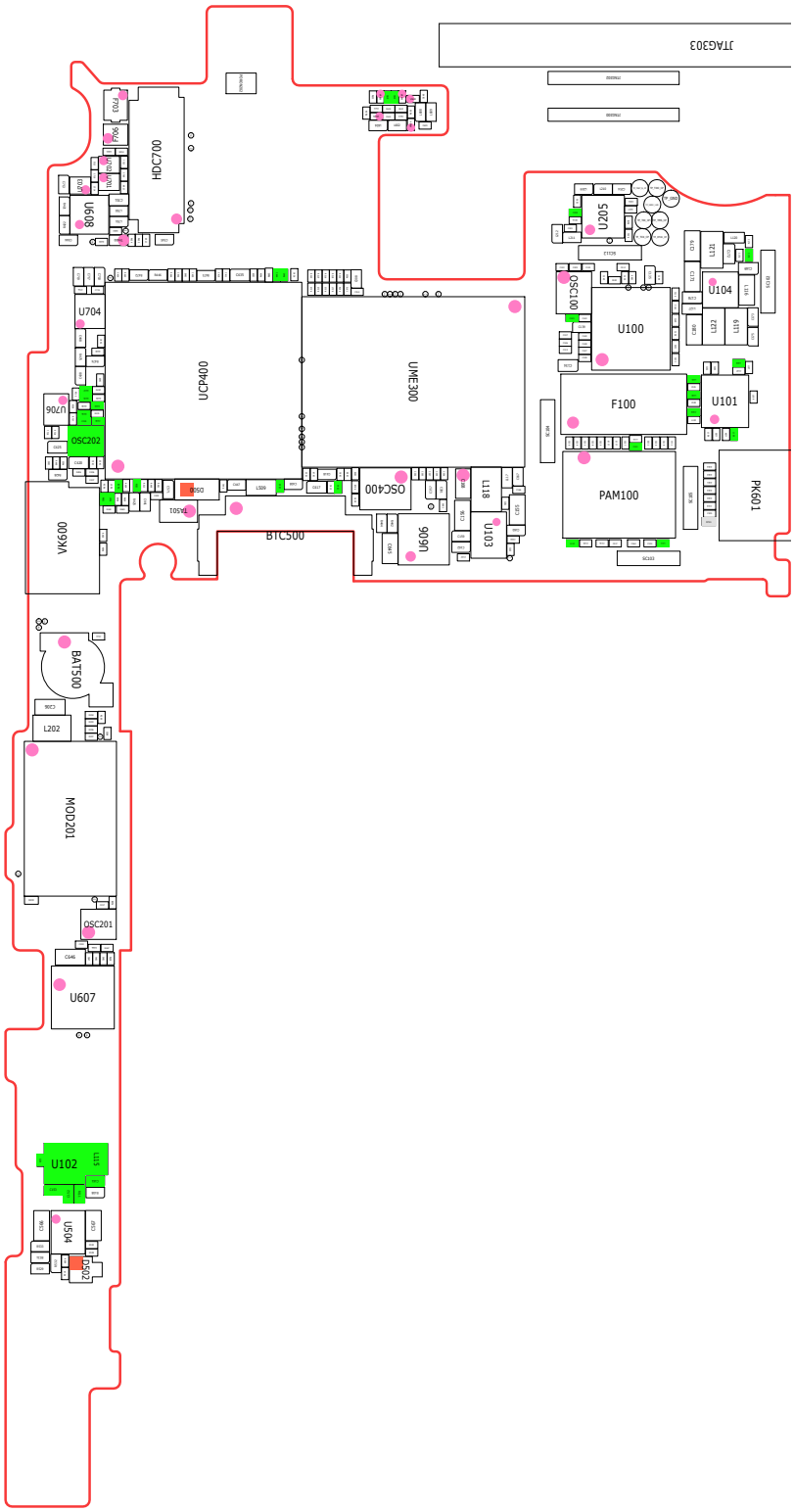
8-2-2. Bottom



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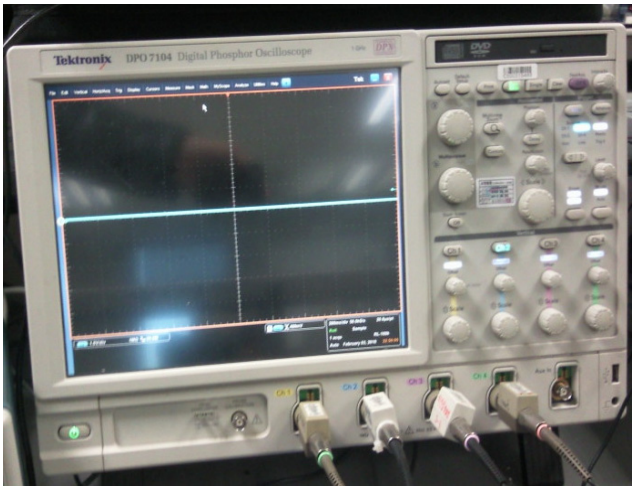
8-3. Flow Chart of Troubleshooting

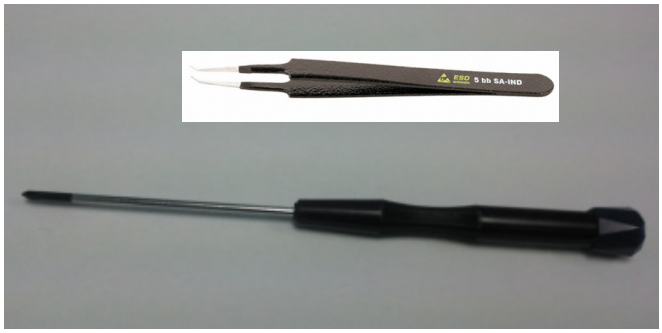
Equipments



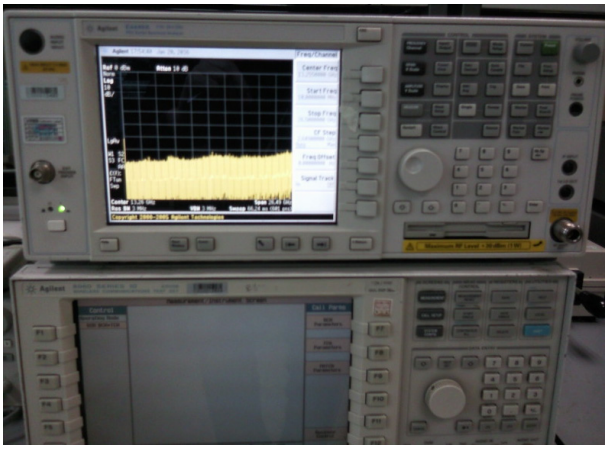
↑ Oscilloscope

↑ Digital Multimeter

↑ Power Supply



↑ + driver, ESD Safe Tweezer



↑ 8960 & Spectrum Analyzer

↑ Soldering iron

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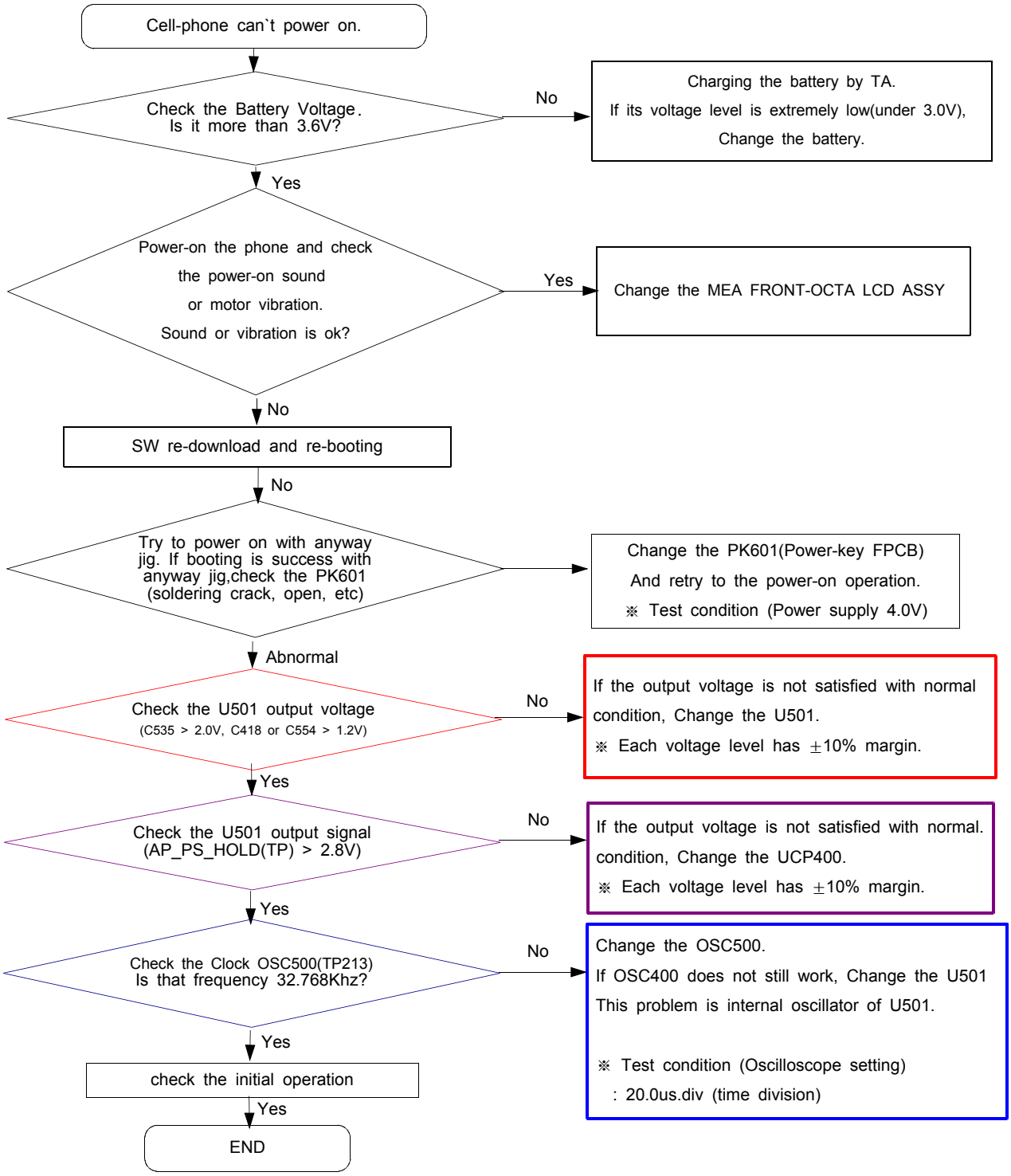
8-3-1. Power On


Cell-phone can`t power on.
Check the Battery Voltage.
Is it more than 3.6V?
No
Charging the battery by TA.
If its voltage level is extremely low(under 3.0V),
Change the battery.
Yes
Power-on the phone and check
the power-on sound
or motor vibration.
Sound or vibration is ok?
Yes
Change the MEA FRONT-OCTA LCD ASSY
No
SW re-download and re-booting
No
Try to power on with anyway
jig. If booting is success with
anyway jig,check the PK601
(soldering crack, open, etc)
Change the PK601(Power-key FPCB)
And retry to the power-on operation.
※ Test condition (Power supply 4.0V)
Abnormal
Check the U501 output voltage
(C535 > 2.0V, C418 or C554 > 1.2V)
No
If the output voltage is not satisfied with normal
condition, Change the U501.
※ Each voltage level has ±10% margin.
Yes
Check the U501 output signal
(AP_PS_HOLD(TP) > 2.8V)
No
If the output voltage is not satisfied with normal.
condition, Change the UCP400.
※ Each voltage level has ±10% margin.
Yes
Check the Clock OSC500(TP213)
Is that frequency 32.768Khz?
No
Change the OSC500.
If OSC400 does not still work, Change the U501
This problem is internal oscillator of U501.
※ Test condition (Oscilloscope setting)
: 20.0us.div (time division)
Yes
check the initial operation
Yes
END

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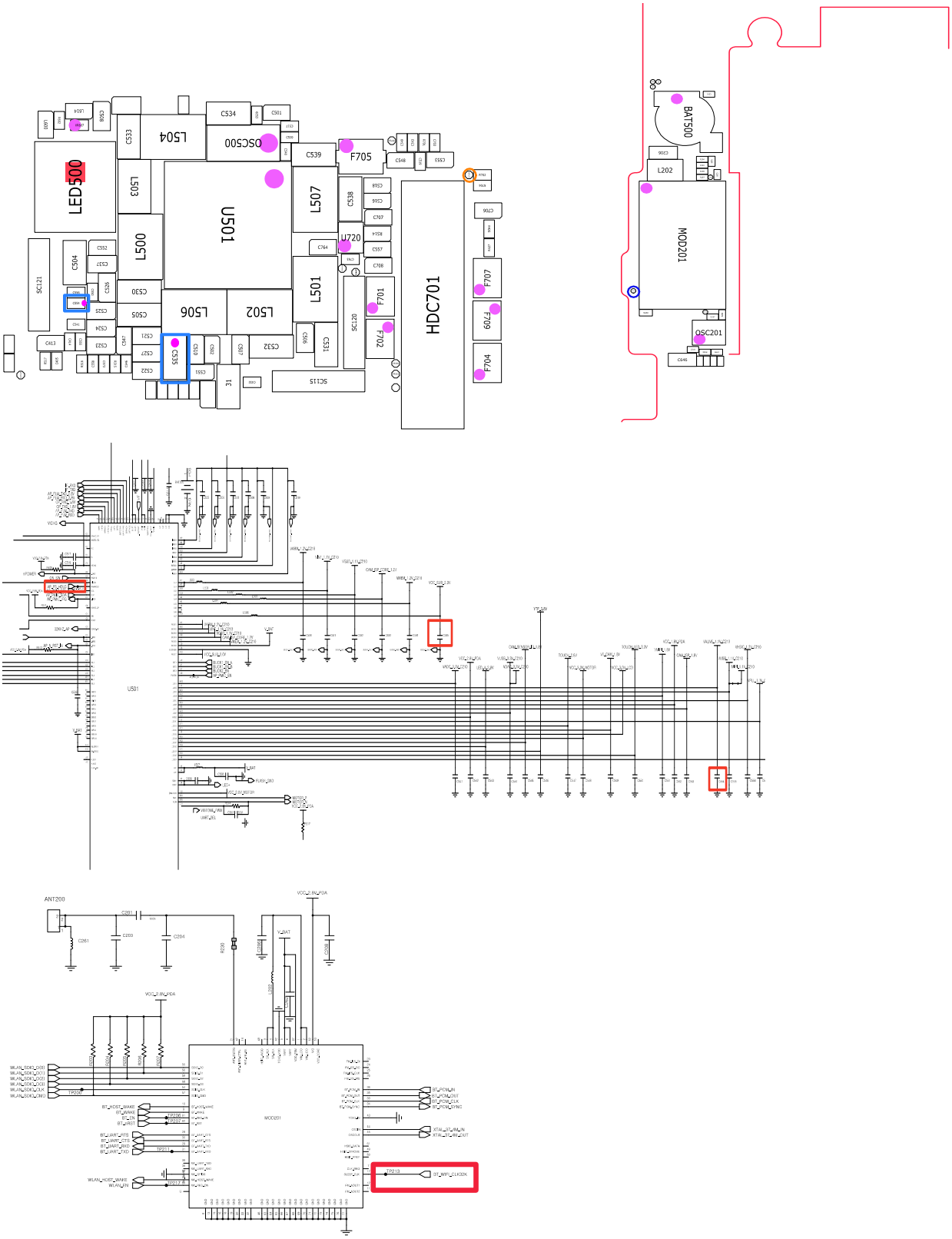

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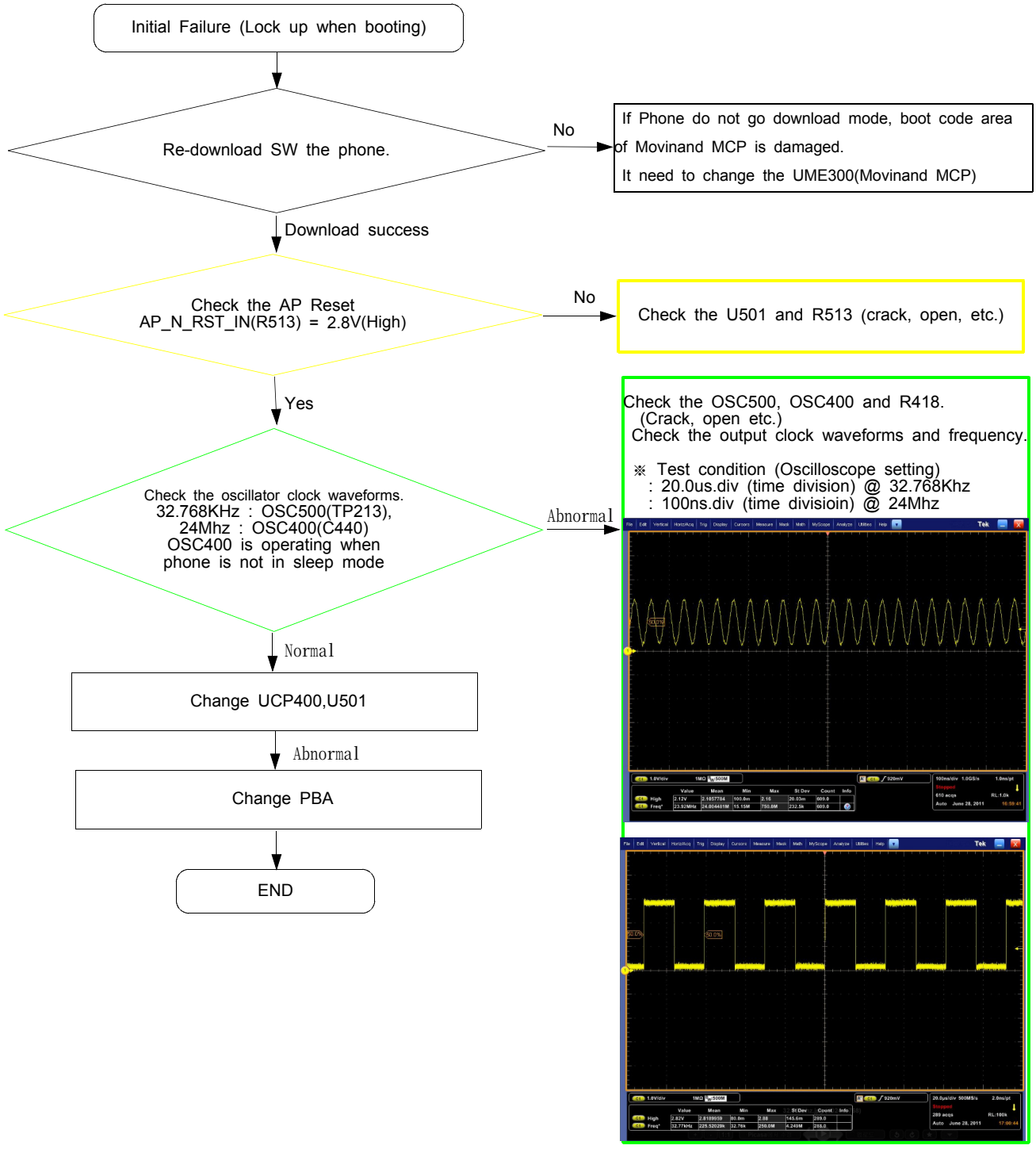
8-3-2. Initial (Lock up)


Initial Failure (Lock up when booting)
Re-download SW the phone.
No
If Phone do not go download mode, boot code area of Movinand MCP is damaged.
It need to change the UME300(Movinand MCP)
Download success
Check the AP Reset
AP_N_RST_IN(R513) = 2.8V(High)
No
Check the U501 and R513 (crack, open, etc.)
Yes
Check the oscillator clock waveforms.
32.768KHz : OSC500(TP213),
24Mhz : OSC400(C440)
OSC400 is operating when phone is not in sleep mode
Abnormal
Check the OSC500, OSC400 and R418.
(Crack, open etc.)
Check the output clock waveforms and frequency.
※ Test condition (Oscilloscope setting)
: 20.0us.div (time division) @ 32.768Khz
: 100ns.div (time divisioin) @ 24Mhz
Normal
Change UCP400,U501
Abnormal
Change PBA
END

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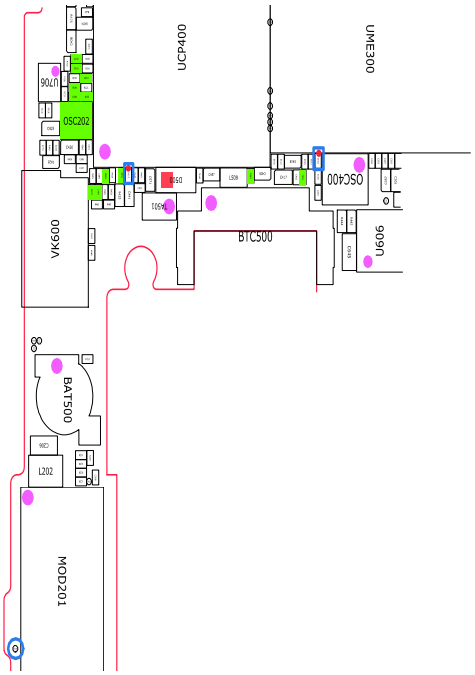

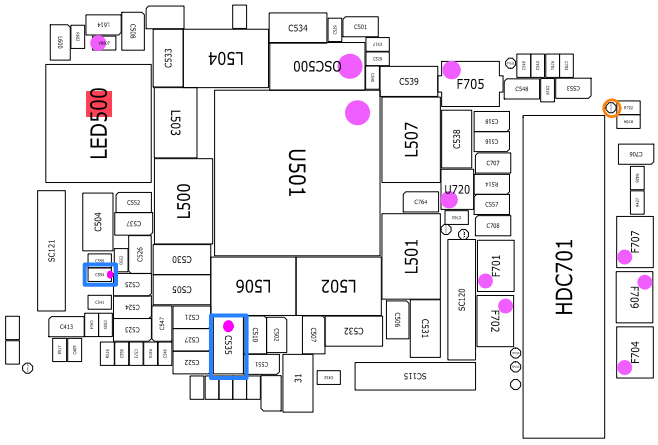

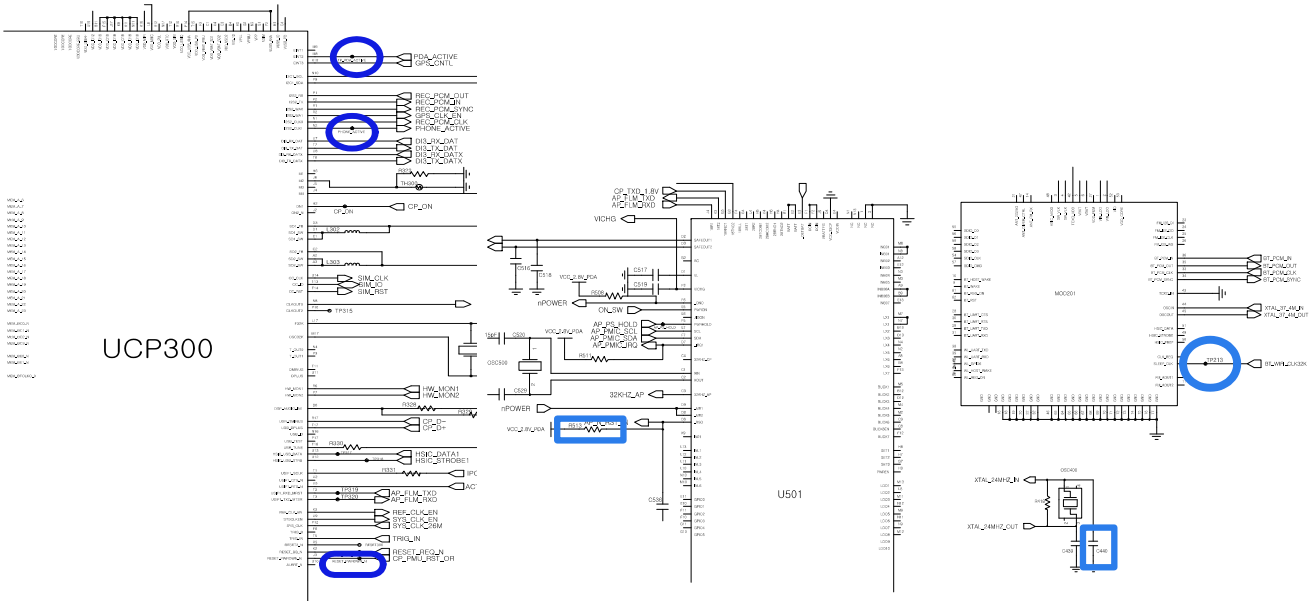

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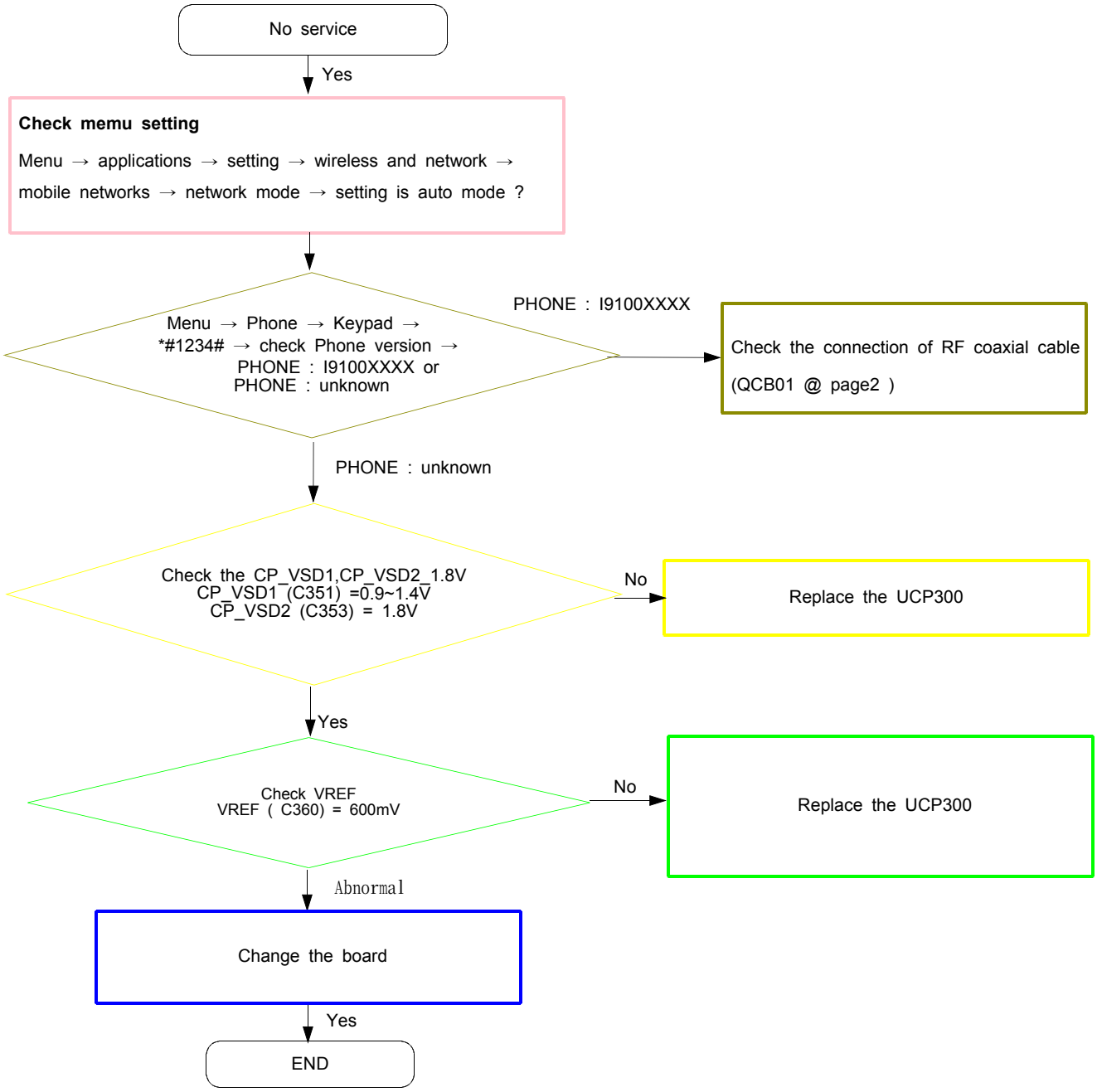
8-3-3. No Service


No service
Yes
Check memu setting
Menu → applications → setting → wireless and network → mobile networks → network mode → setting is auto mode ?
Menu → Phone → Keypad → *#1234# → check Phone version → PHONE : I9100XXXX or PHONE : unknown
PHONE : I9100XXXX
Check the connection of RF coaxial cable (QCB01 @ page2)
PHONE : unknown
Check the CP_VSD1,CP_VSD2_1.8V
CP_VSD1 (C351) =0.9~1.4V
CP_VSD2 (C353) = 1.8V
No
Replace the UCP300
Yes
Check VREF
VREF (C360) = 600mV
No
Replace the UCP300
Abnormal
Change the board
Yes
END

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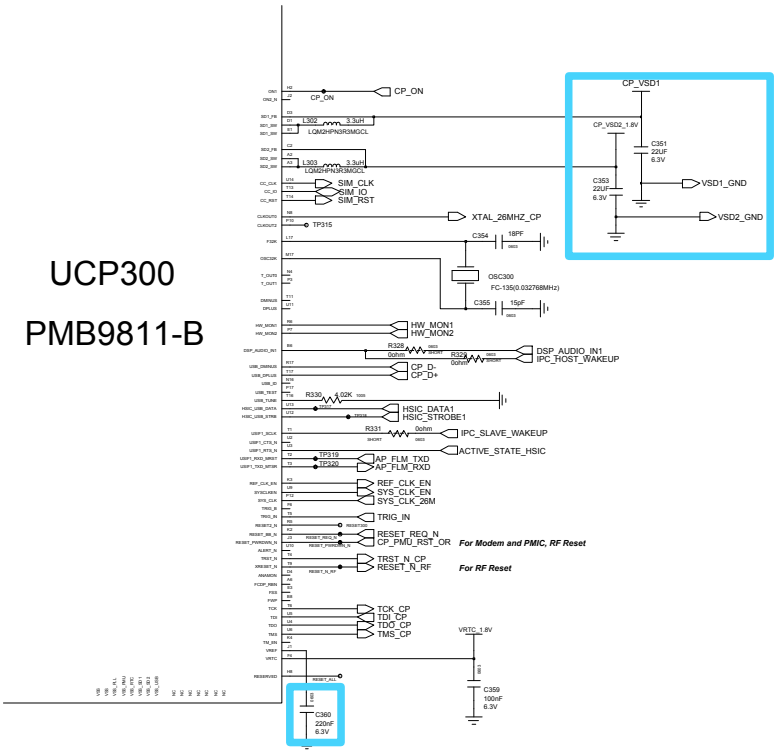
UCP300

PMB9811-B



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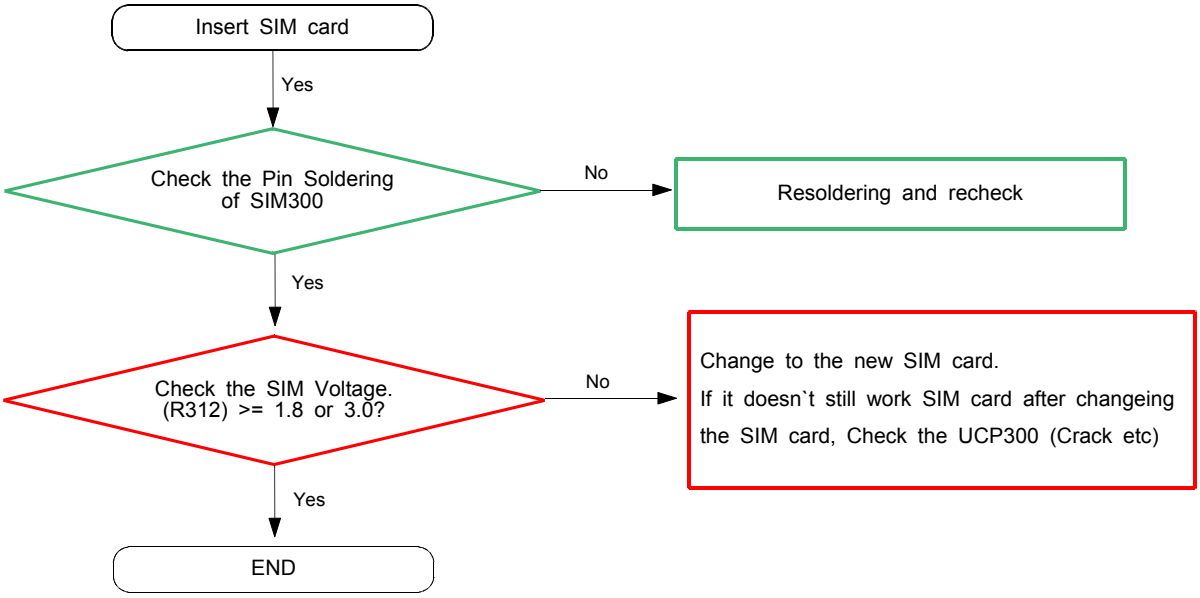
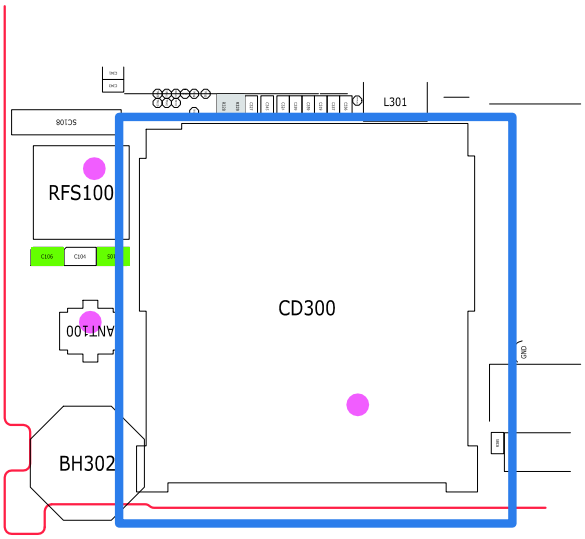
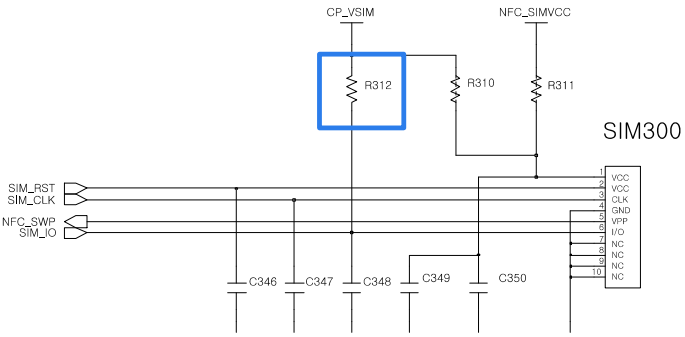
8-3-4. Sim Part


Insert SIM card
Yes
Check the Pin Soldering of SIM300
No
Resoldering and recheck
Yes
Check the SIM Voltage. (R312) >= 1.8 or 3.0?
No
Change to the new SIM card.
If it doesn`t still work SIM card after changeing the SIM card, Check the UCP300 (Crack etc)
Yes
END





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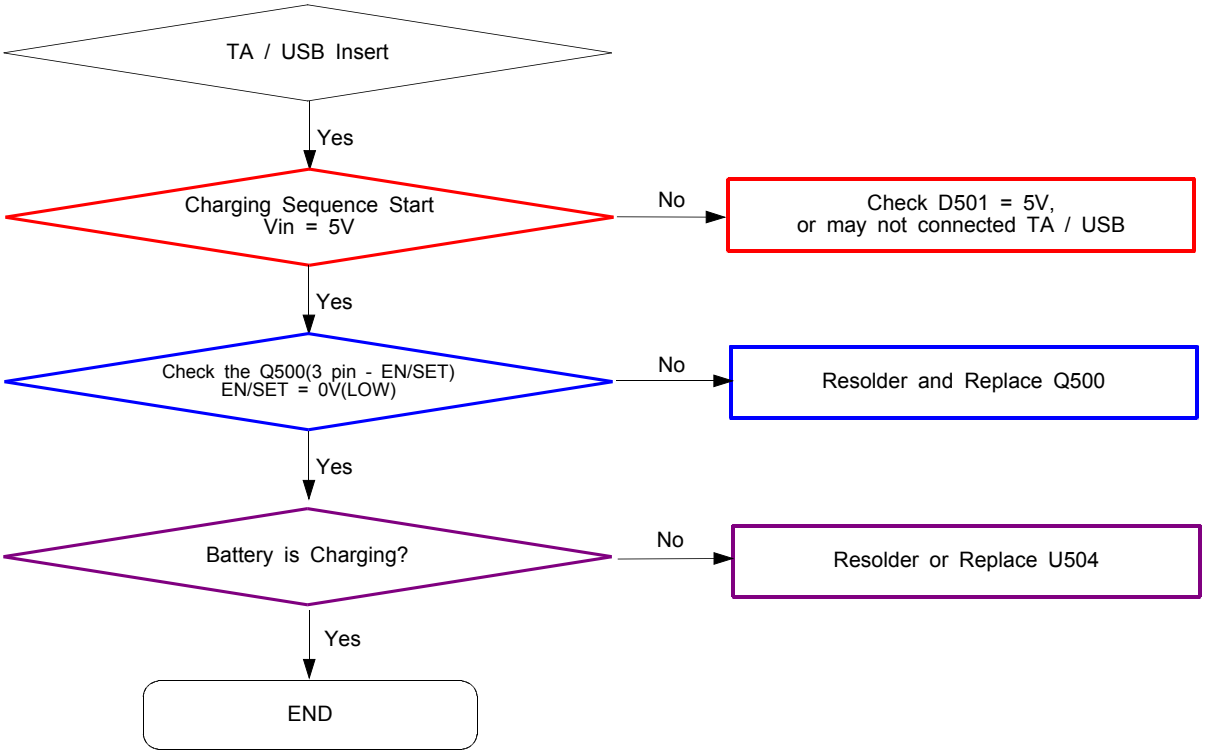
8-3-5. Charging Part



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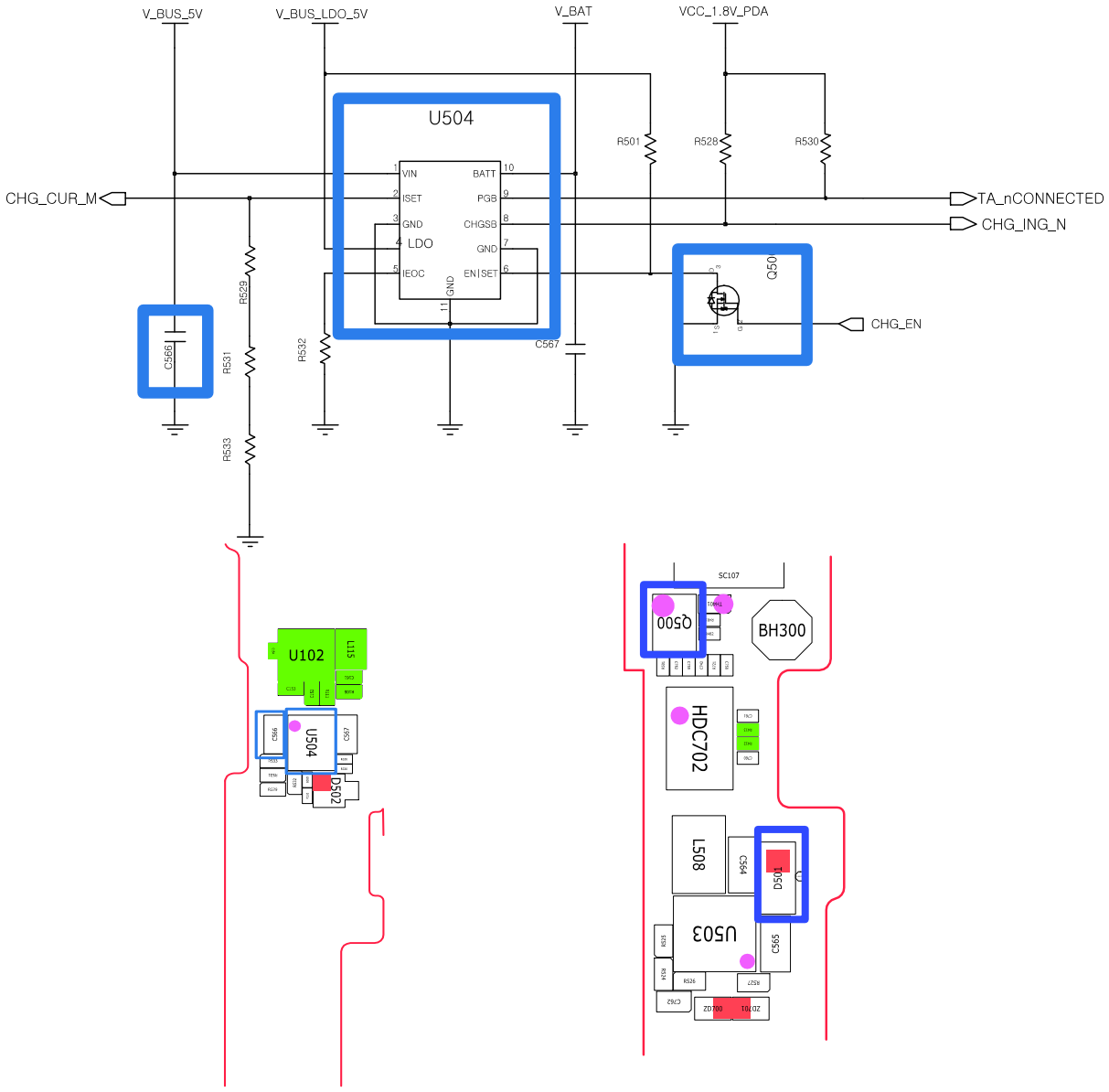

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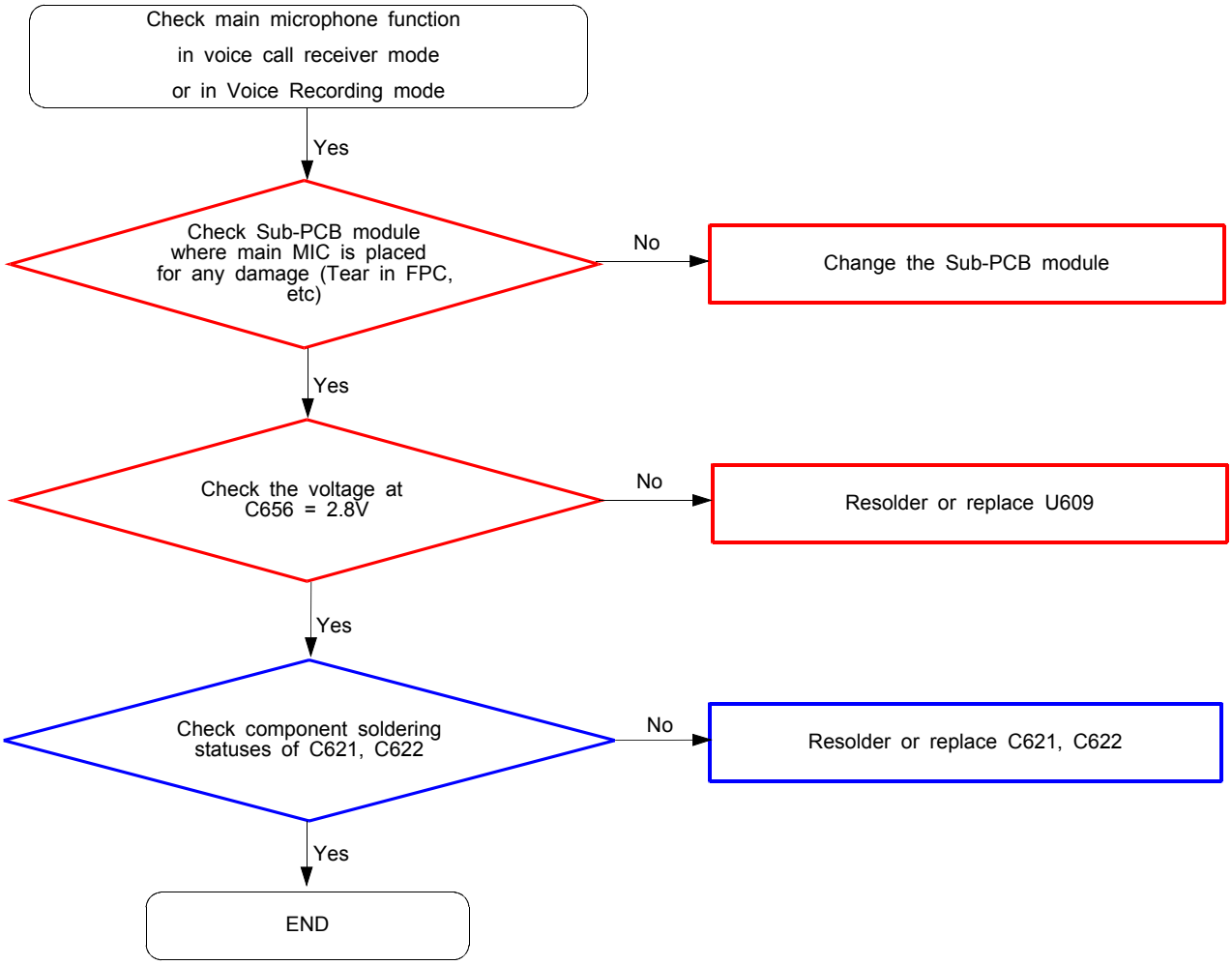
8-3-6. Microphone Part (Main MIC)



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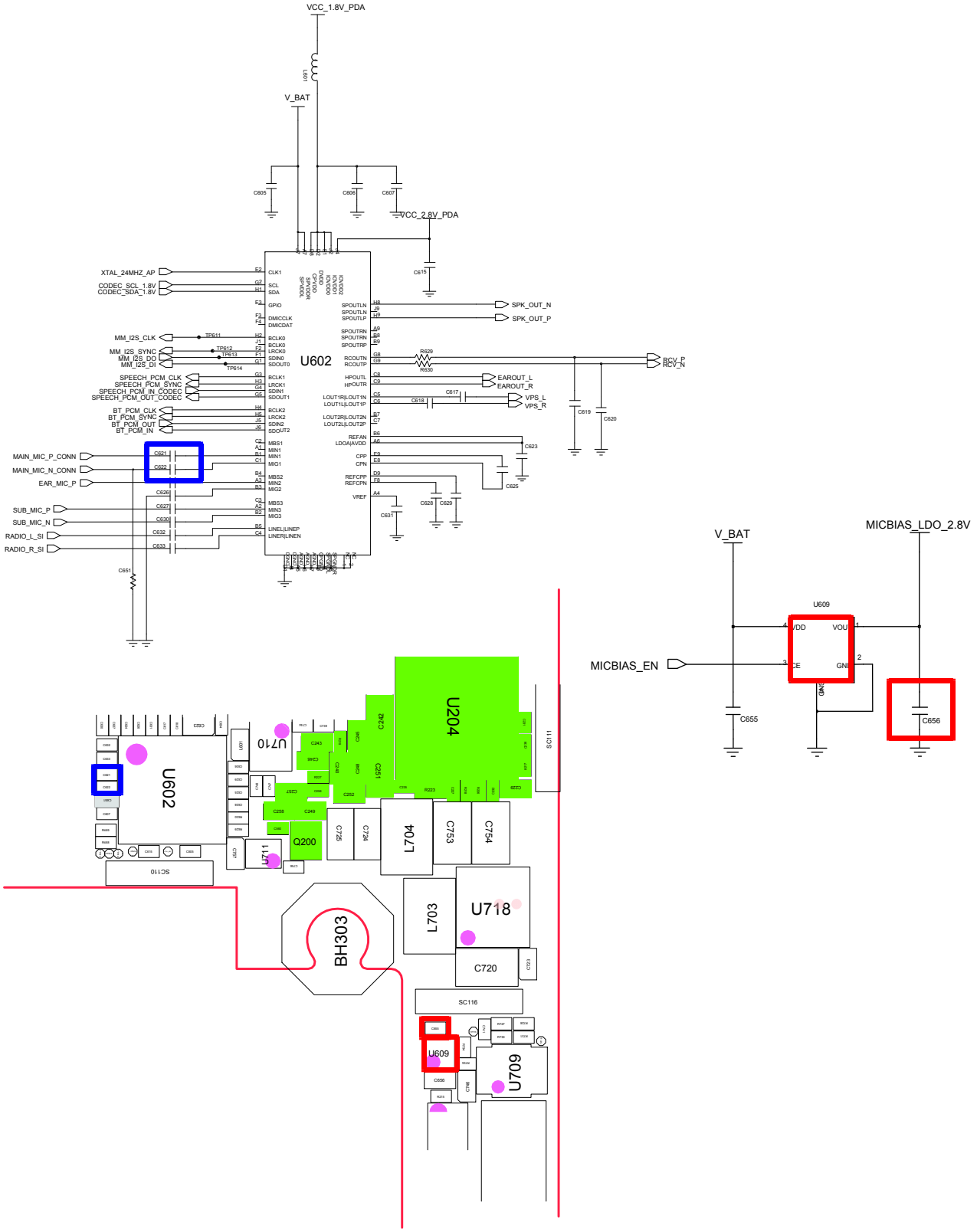

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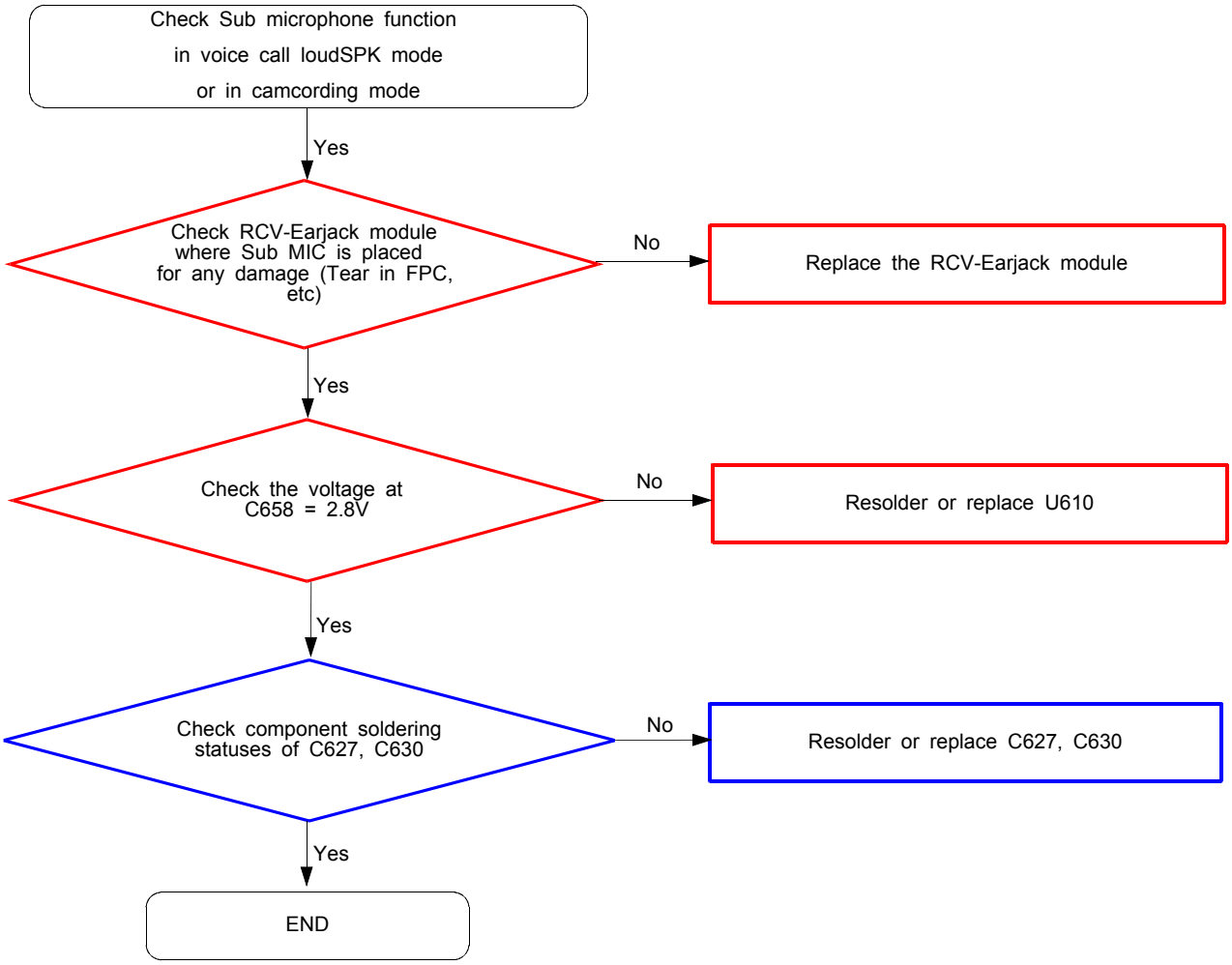
8-3-6-1. Microphone Part (Sub MIC)



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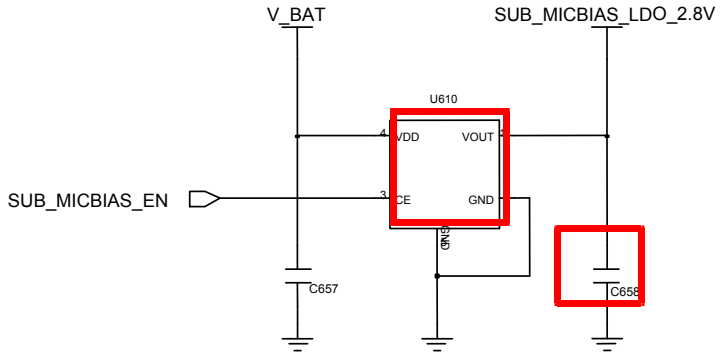

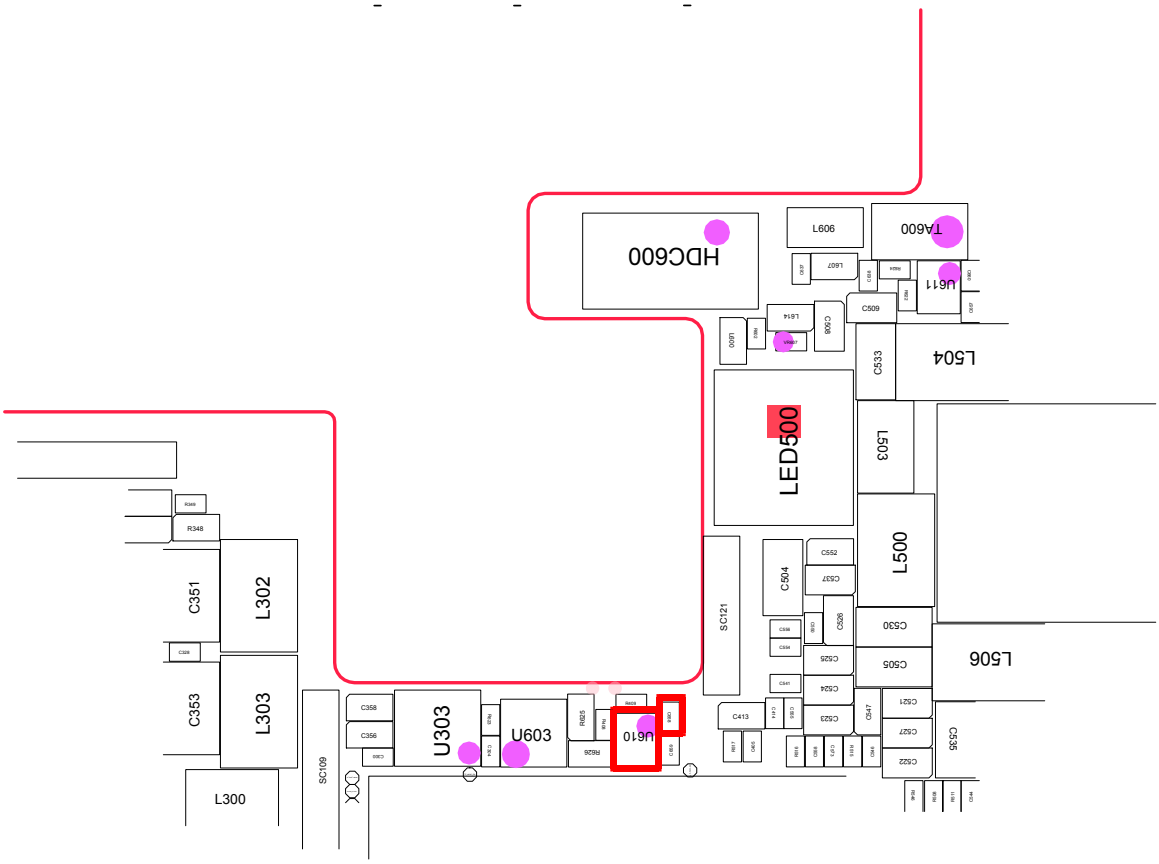

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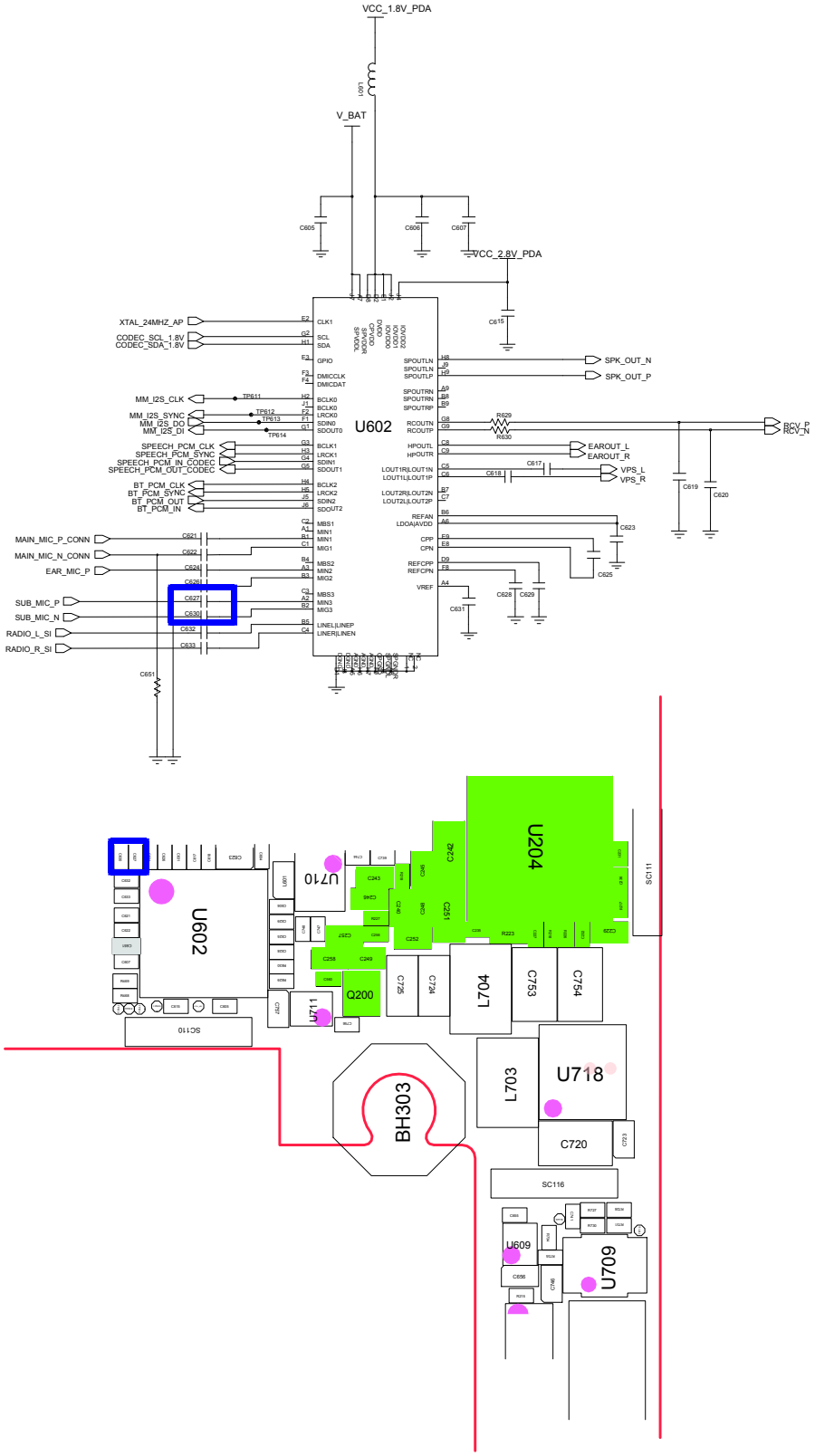

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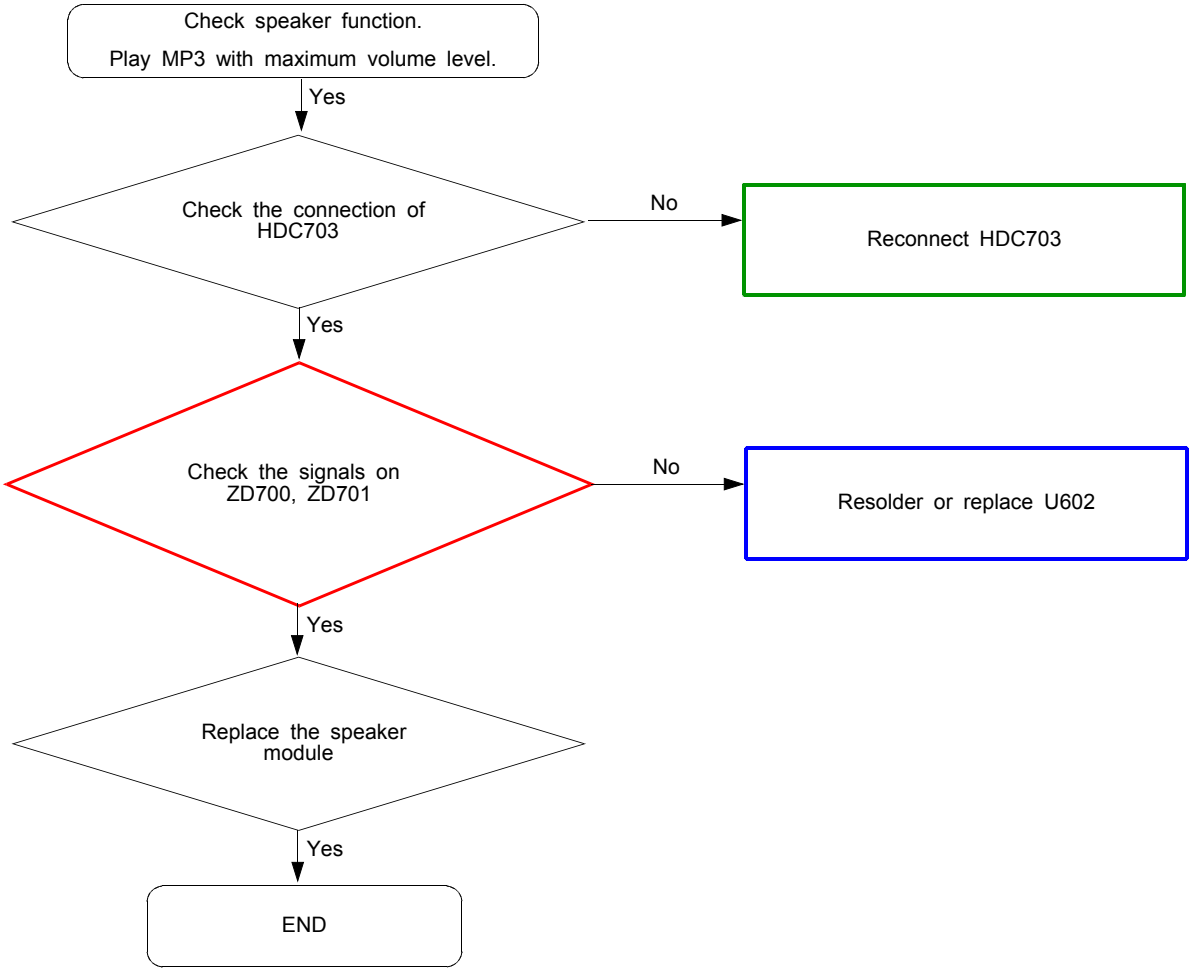
8-3-7. Speaker Part



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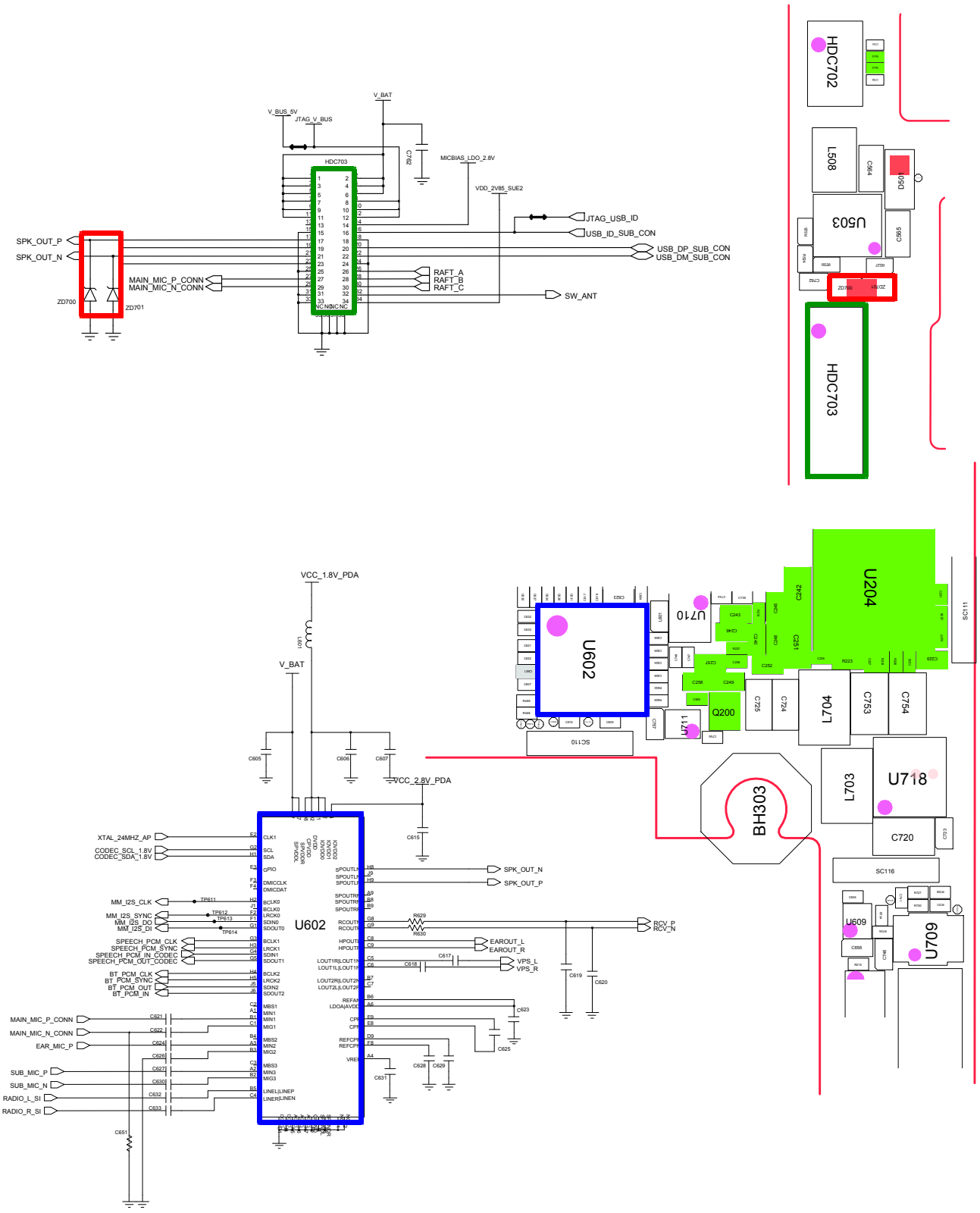

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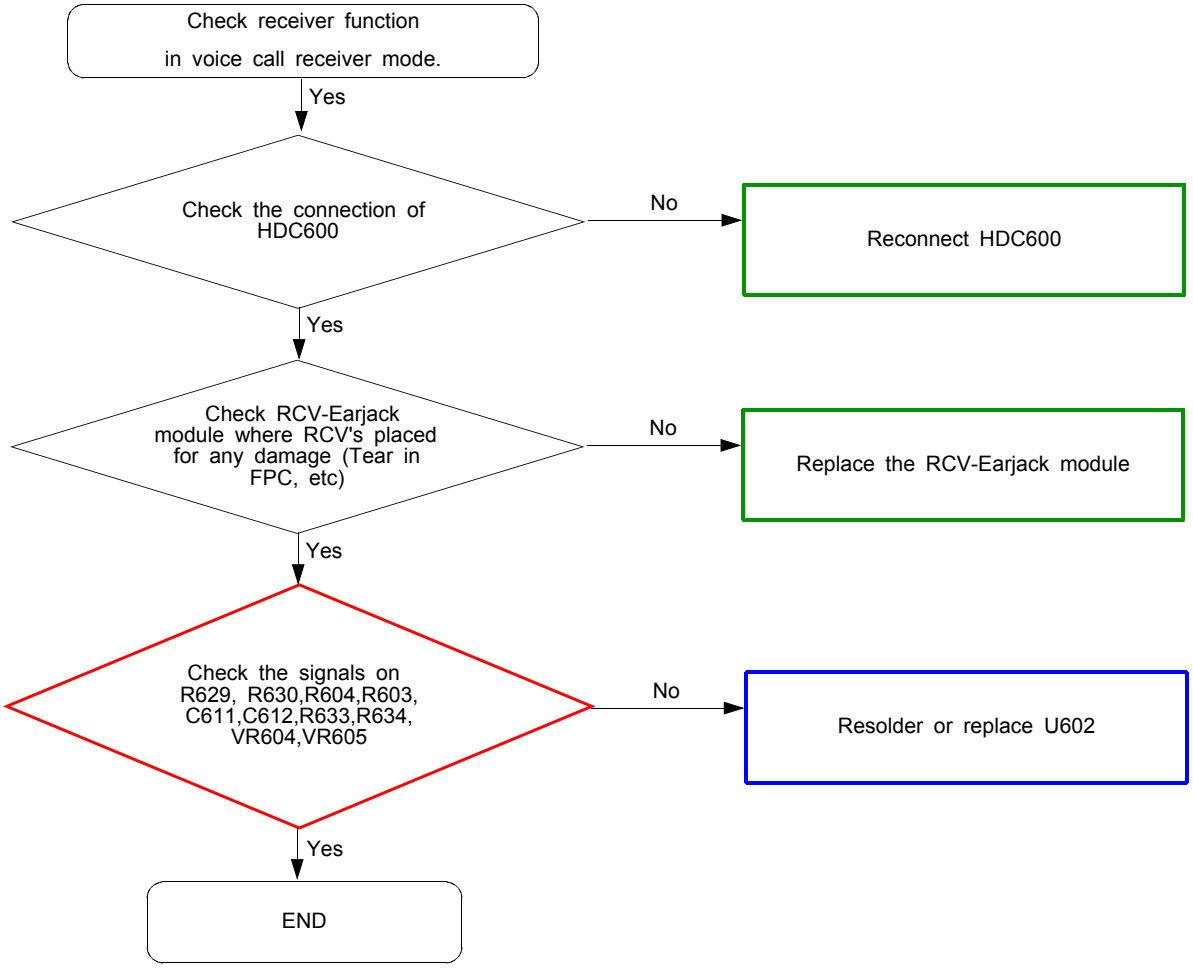
8-3-7. Receiver Part



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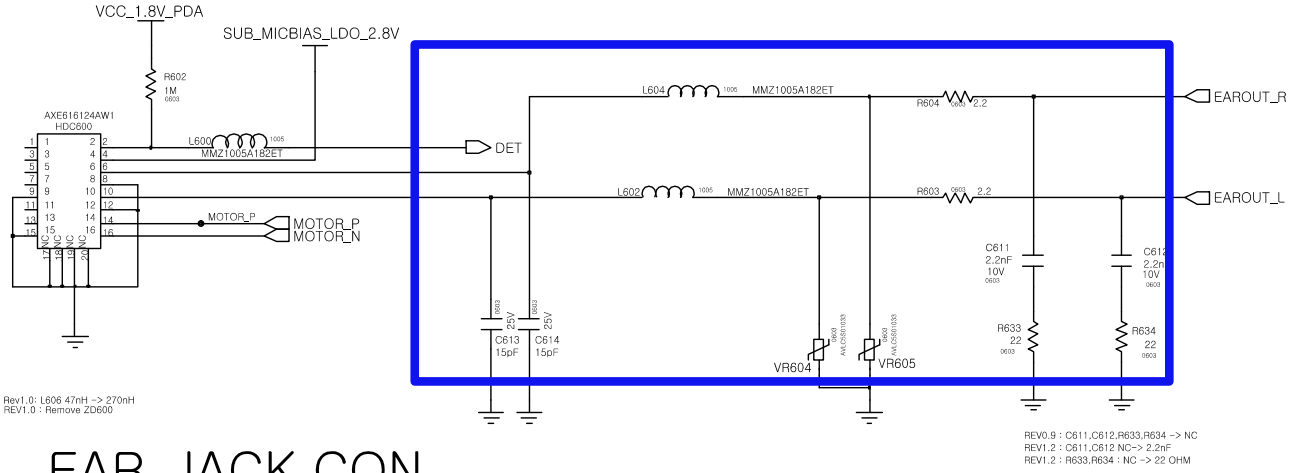

EAR_JACK CON

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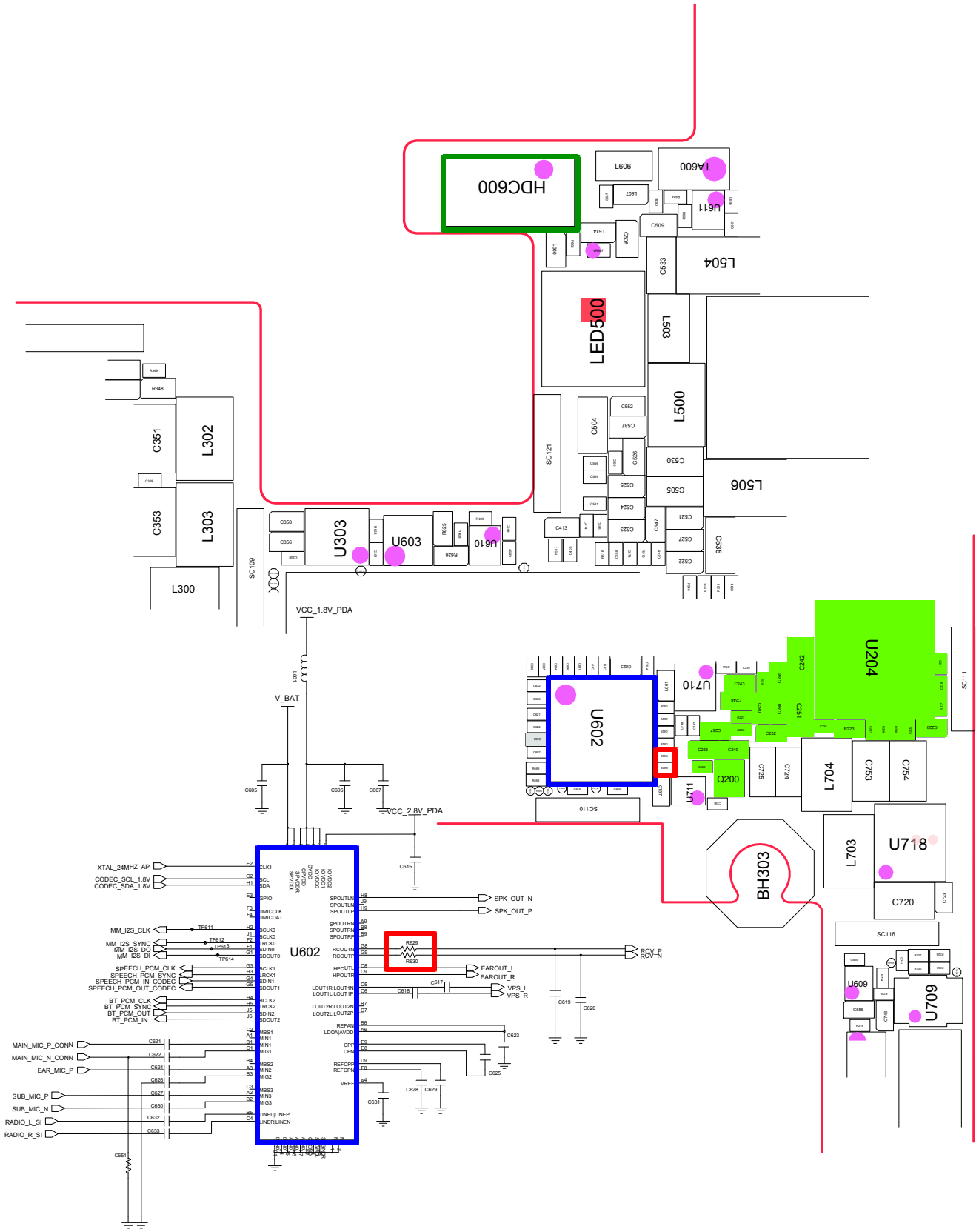
HDC600
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U611
C509
L504
C533
LED500
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L500
L506
C504
C552
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C521
C527
C535
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SC121
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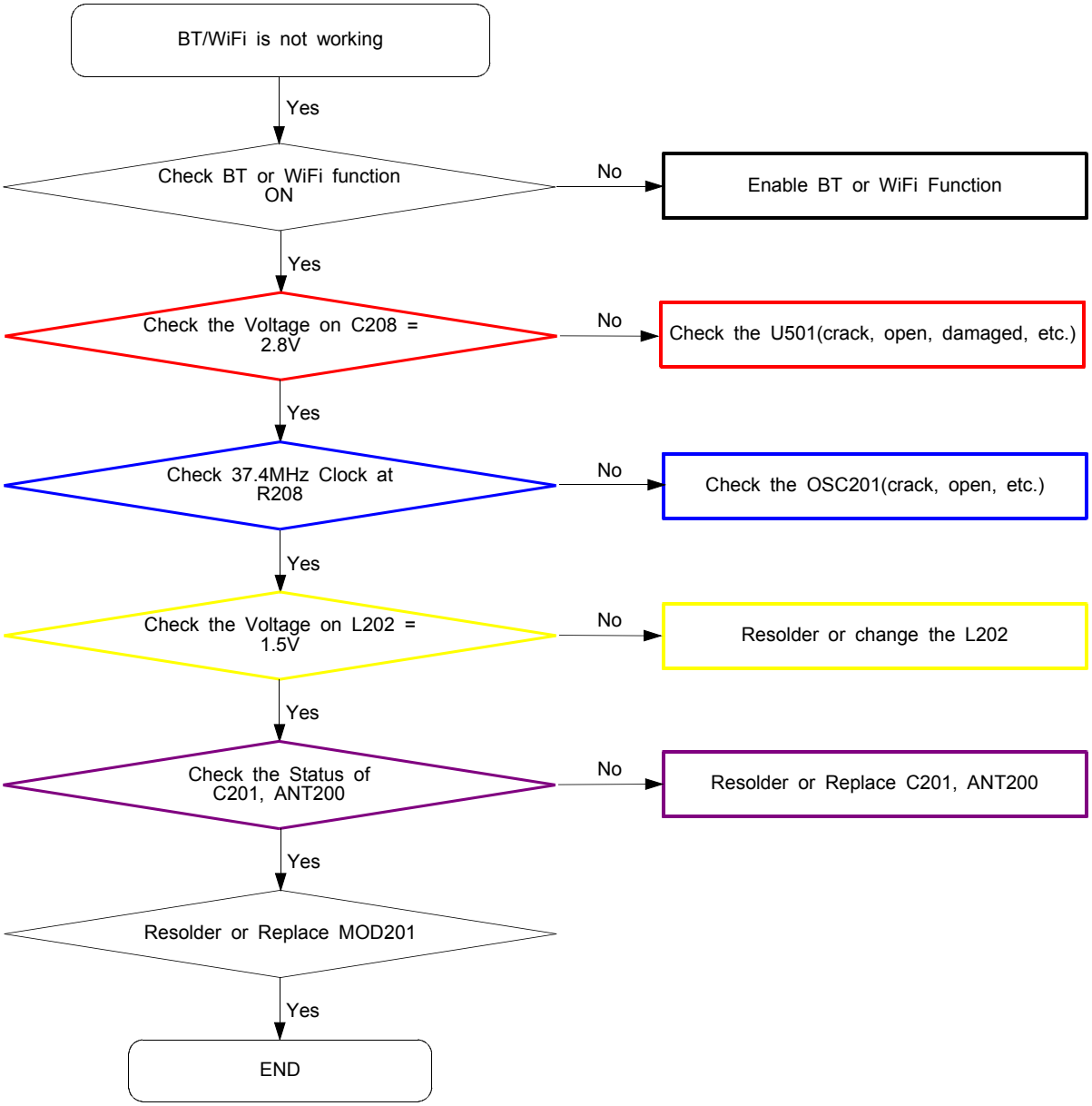
8-3-8. BT/WIFI



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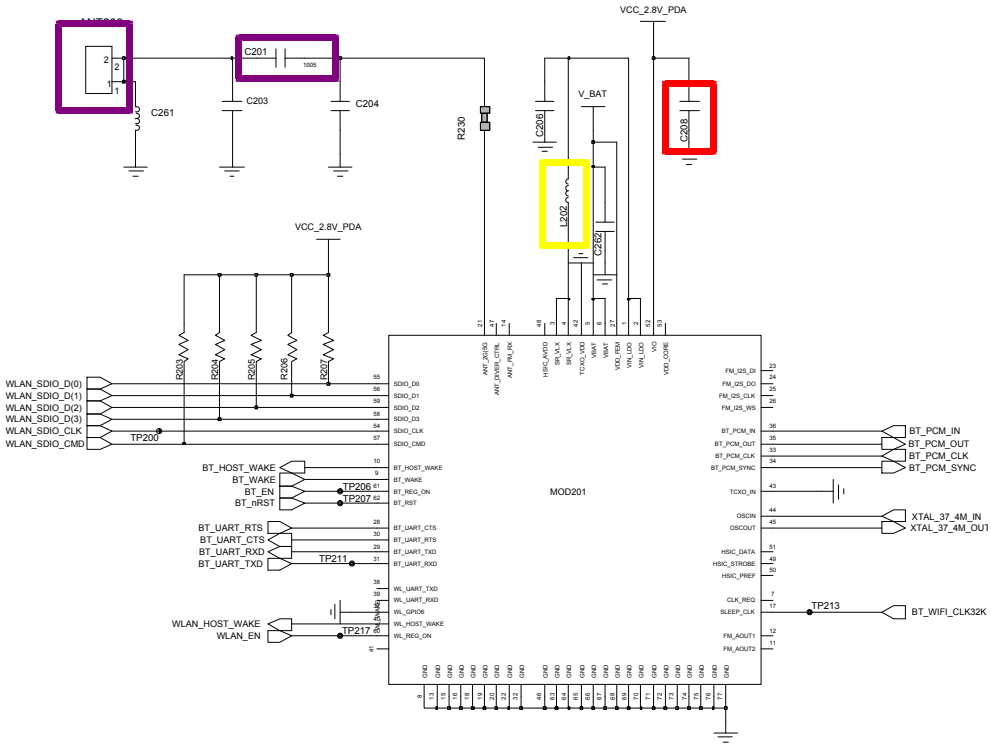

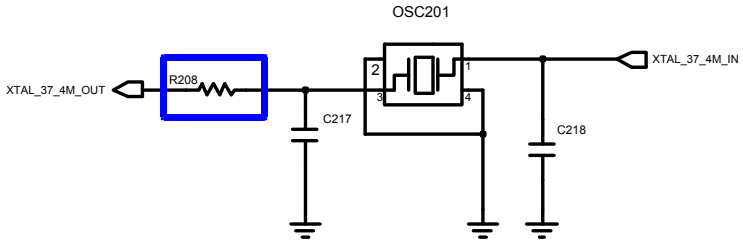

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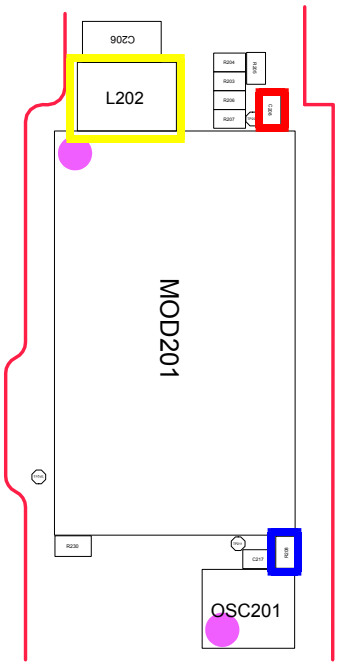

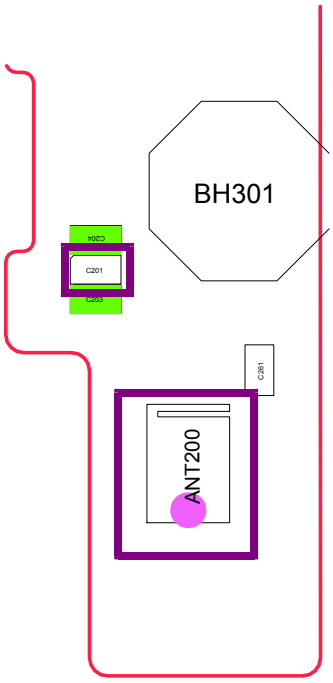

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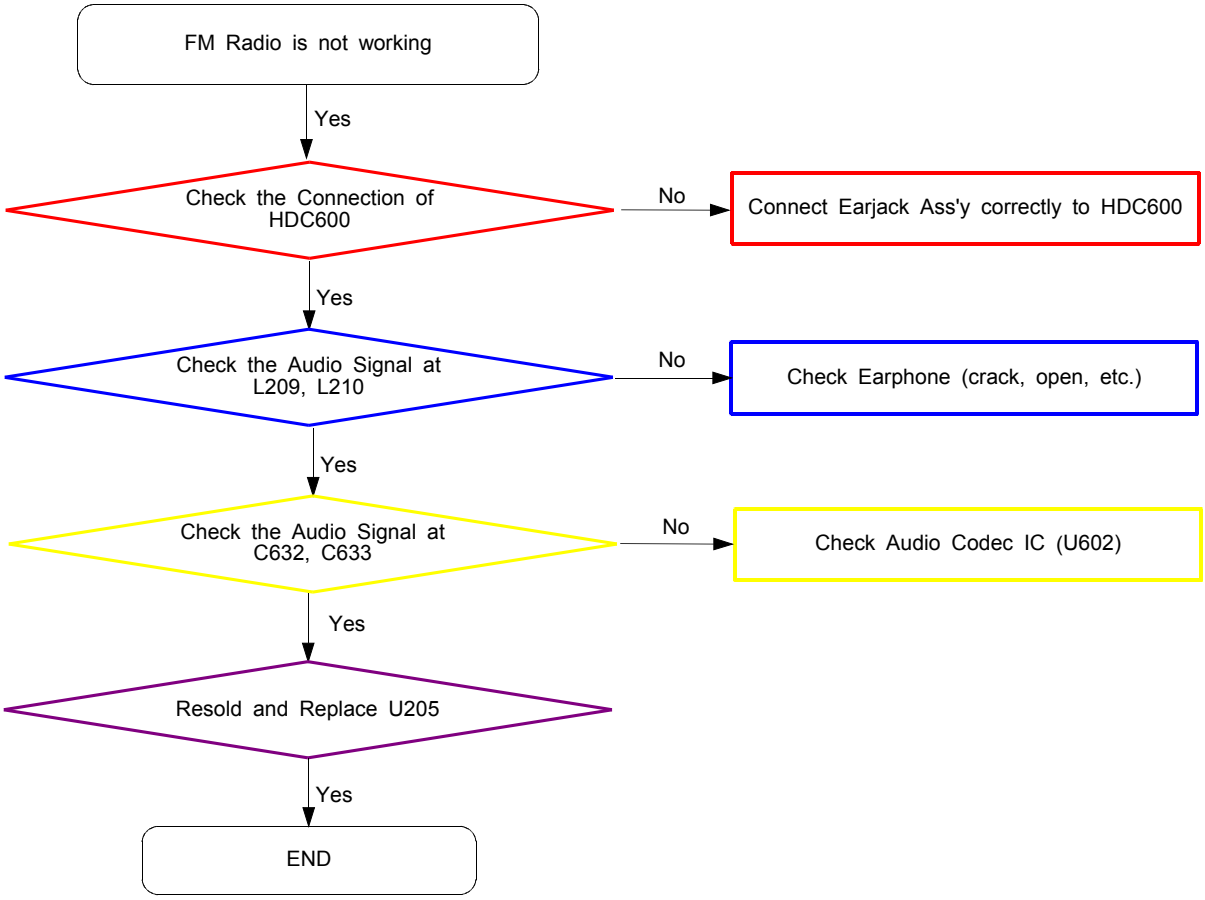
8-3-9. FM RADIO



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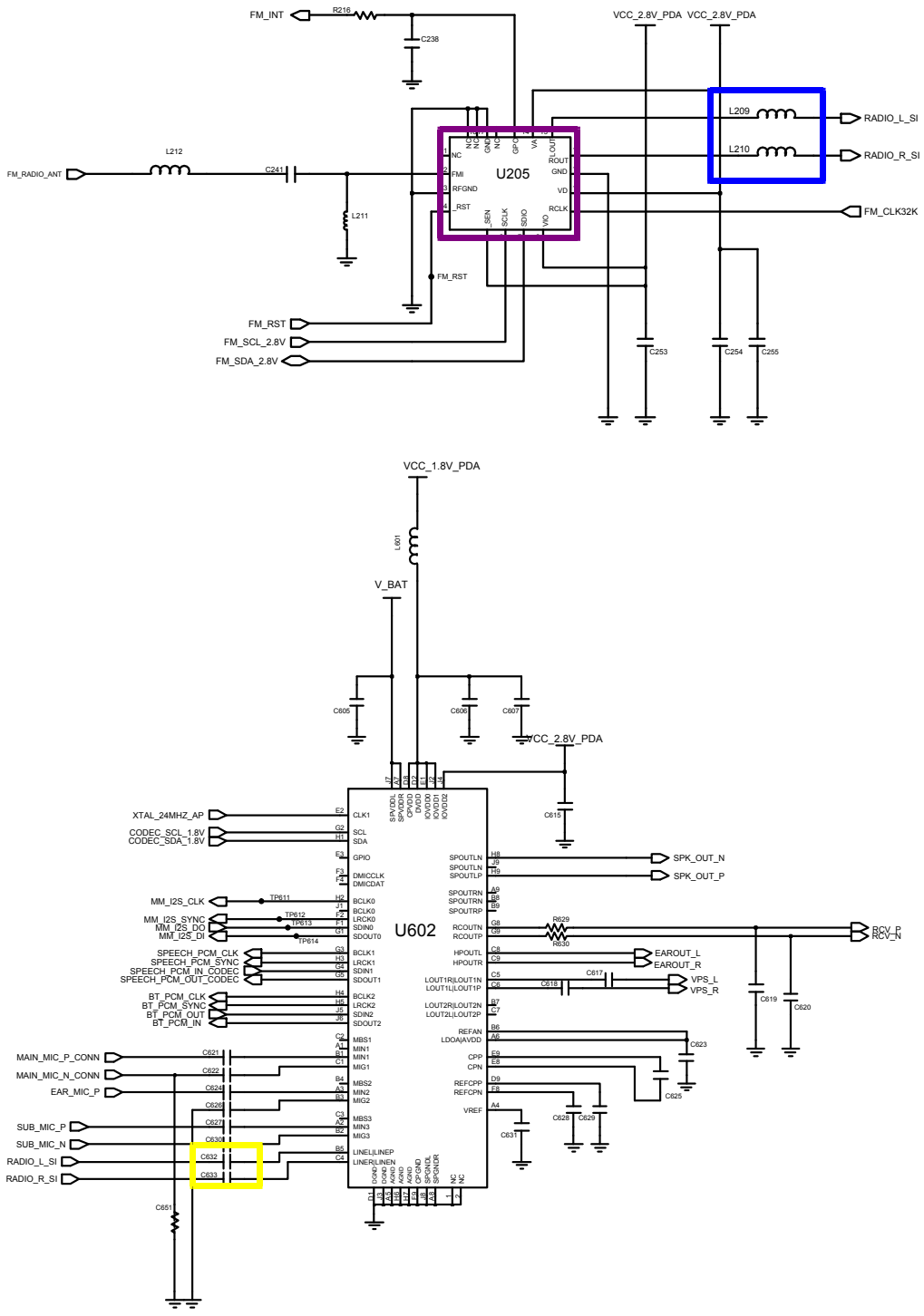

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HDC600
ANT201
HDC704
LED601
LSH
LSC500
LSC501
LSC502
LSC503
LSC504
LSC505
LSC506
LSC507
LSC508
LSC509
LSC510
LSC511
LSC512
LSC513
LSC514
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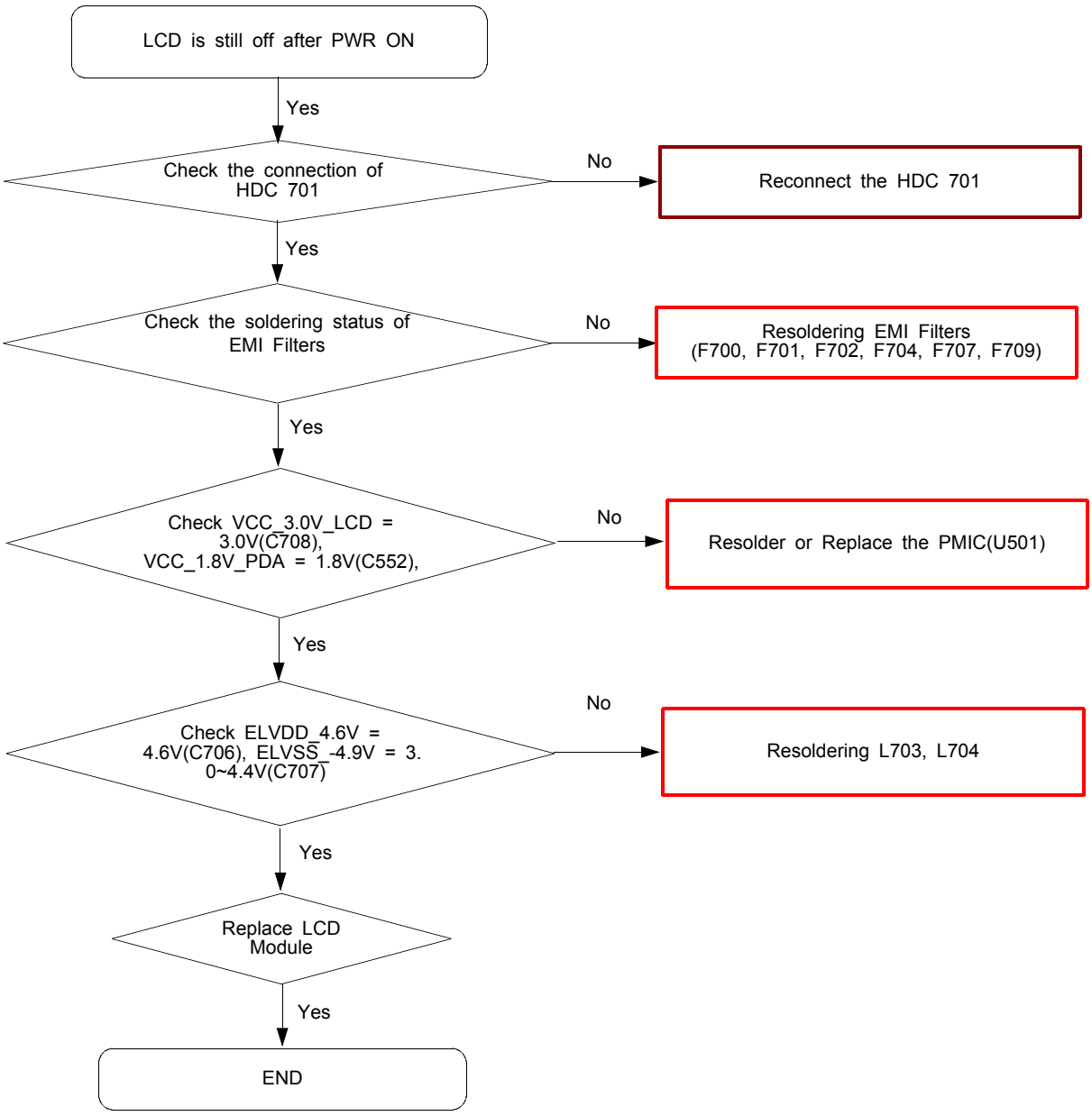
LSC539

8-3-10. LCD



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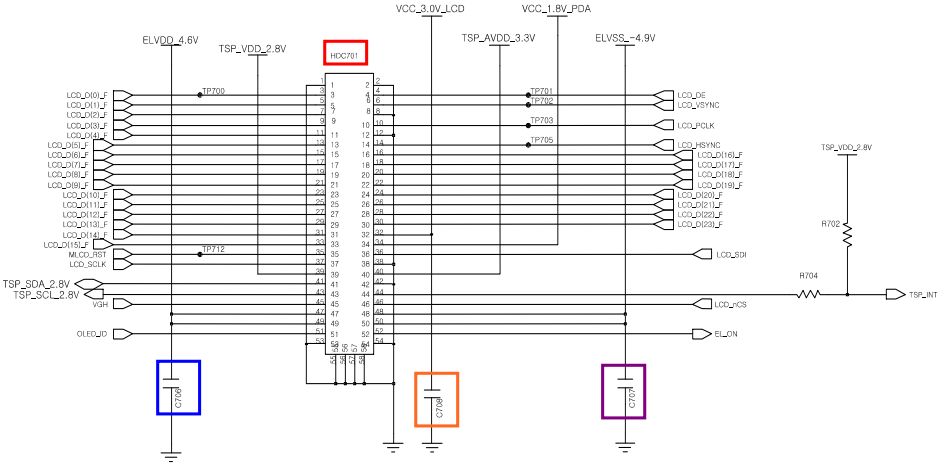

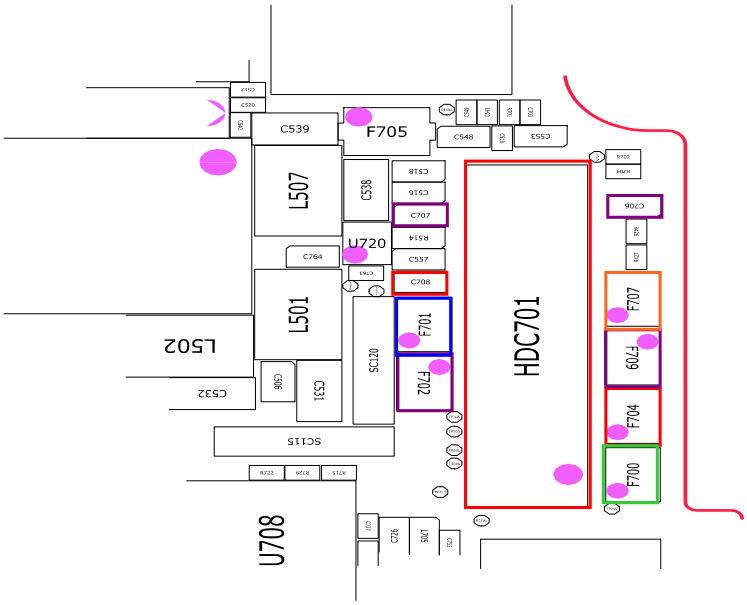

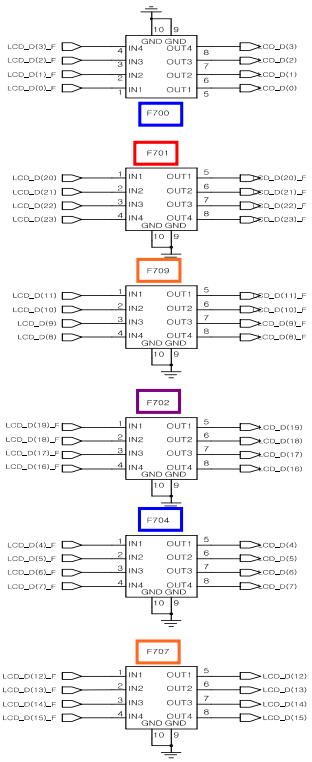

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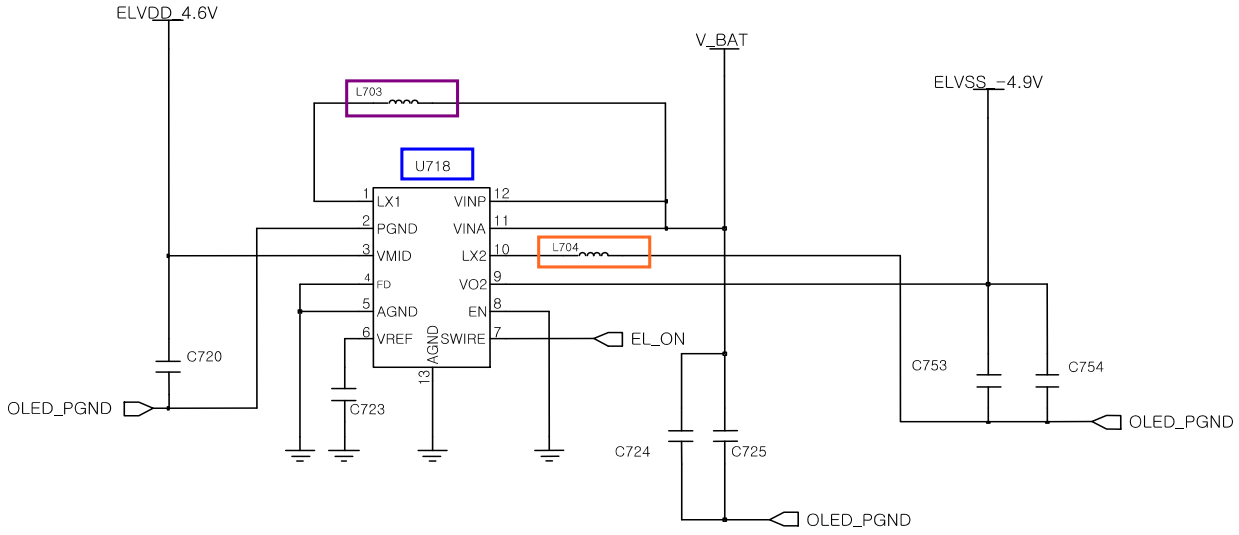

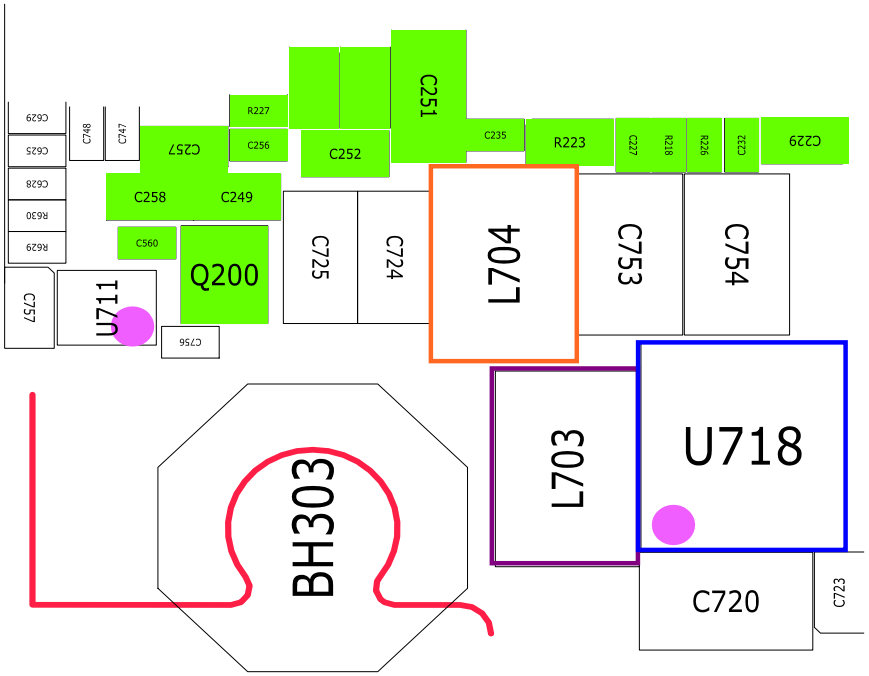

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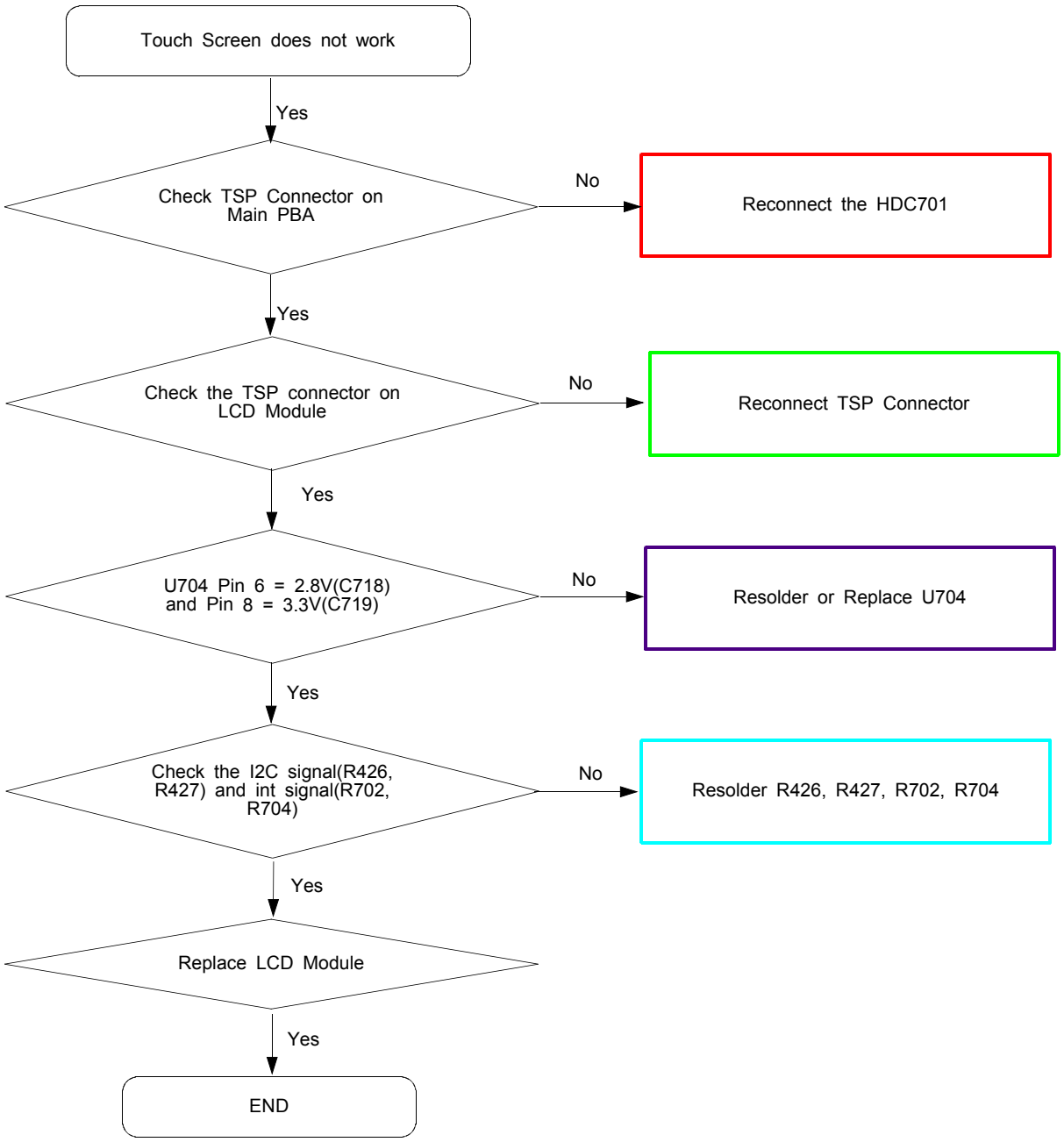
8-3-11. TSP



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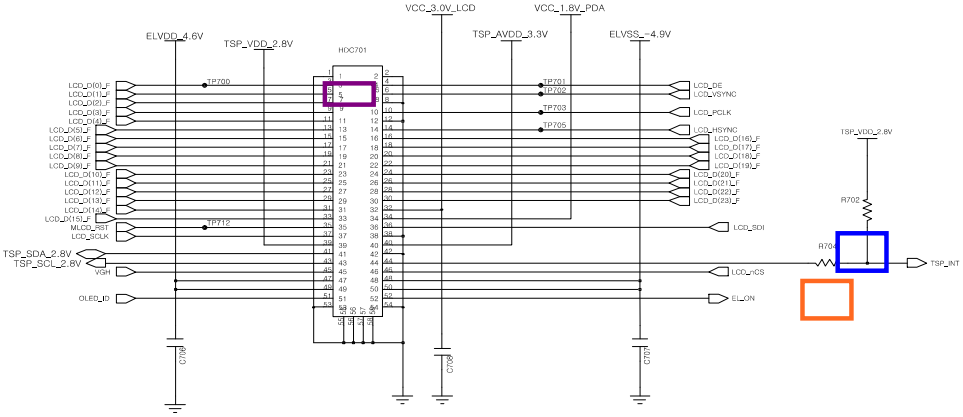
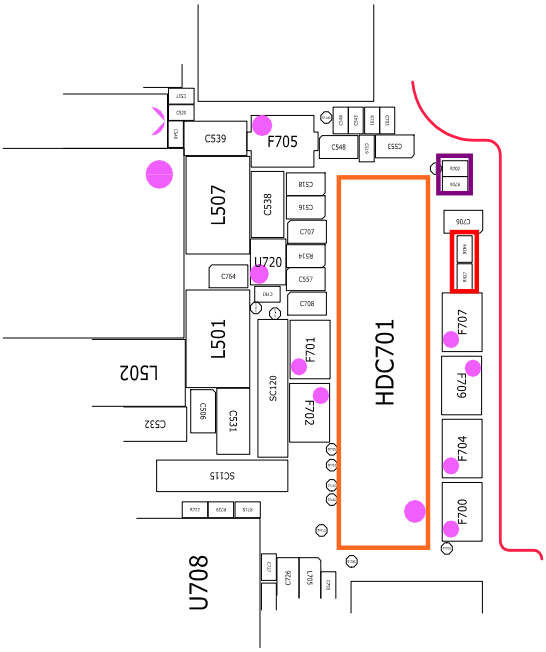
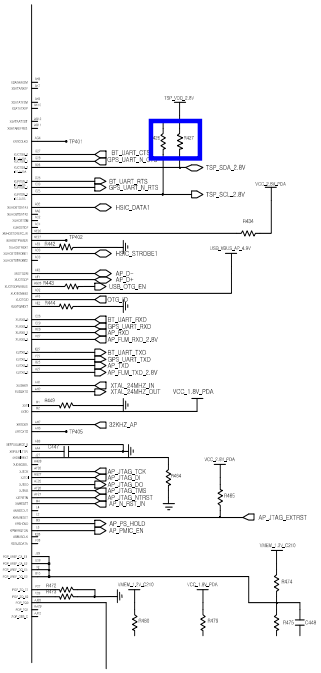




UCP400



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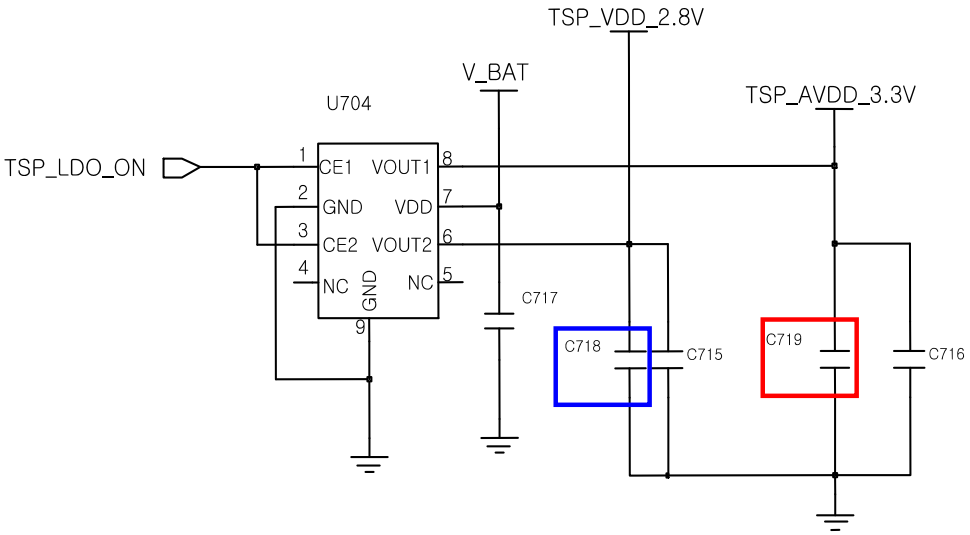

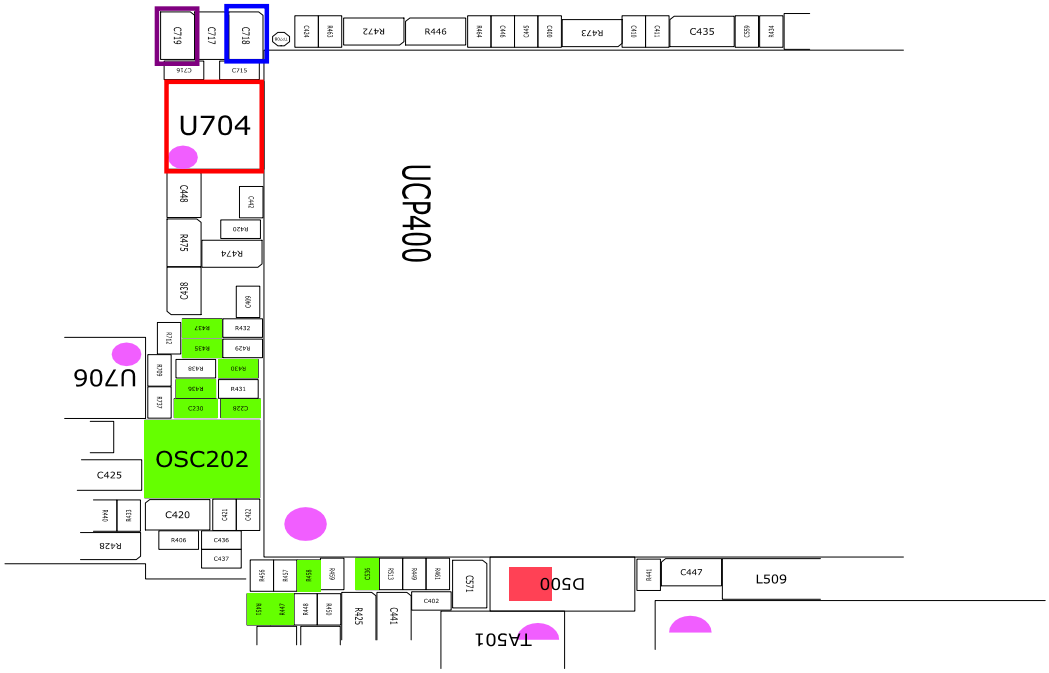

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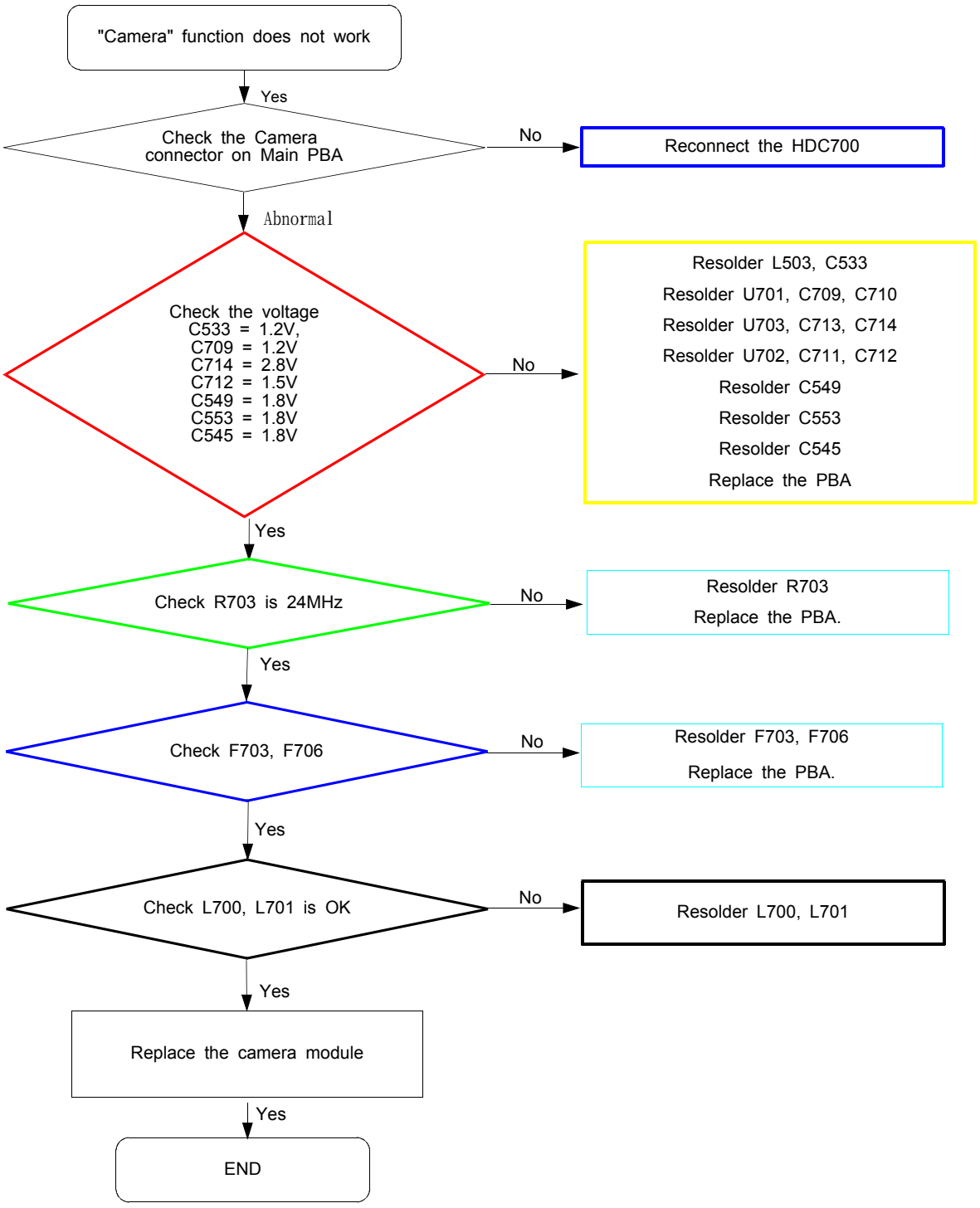
8-3-12. 8M CAM



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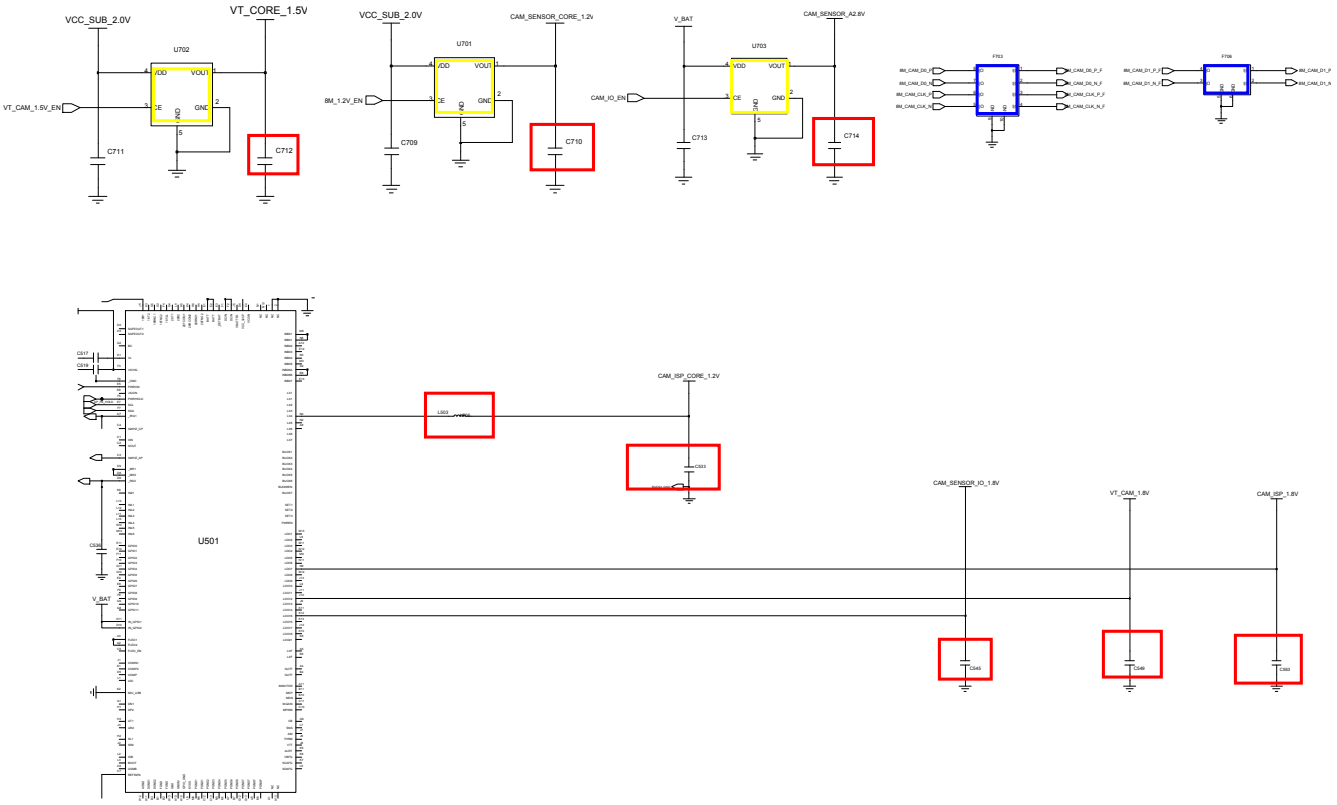

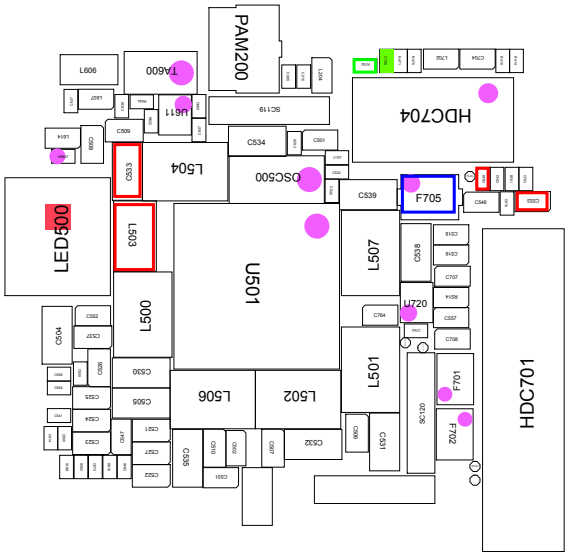

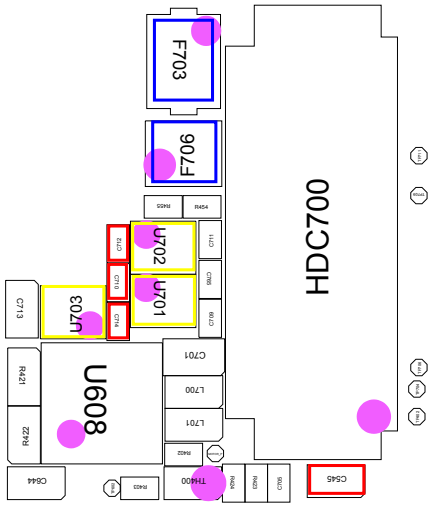

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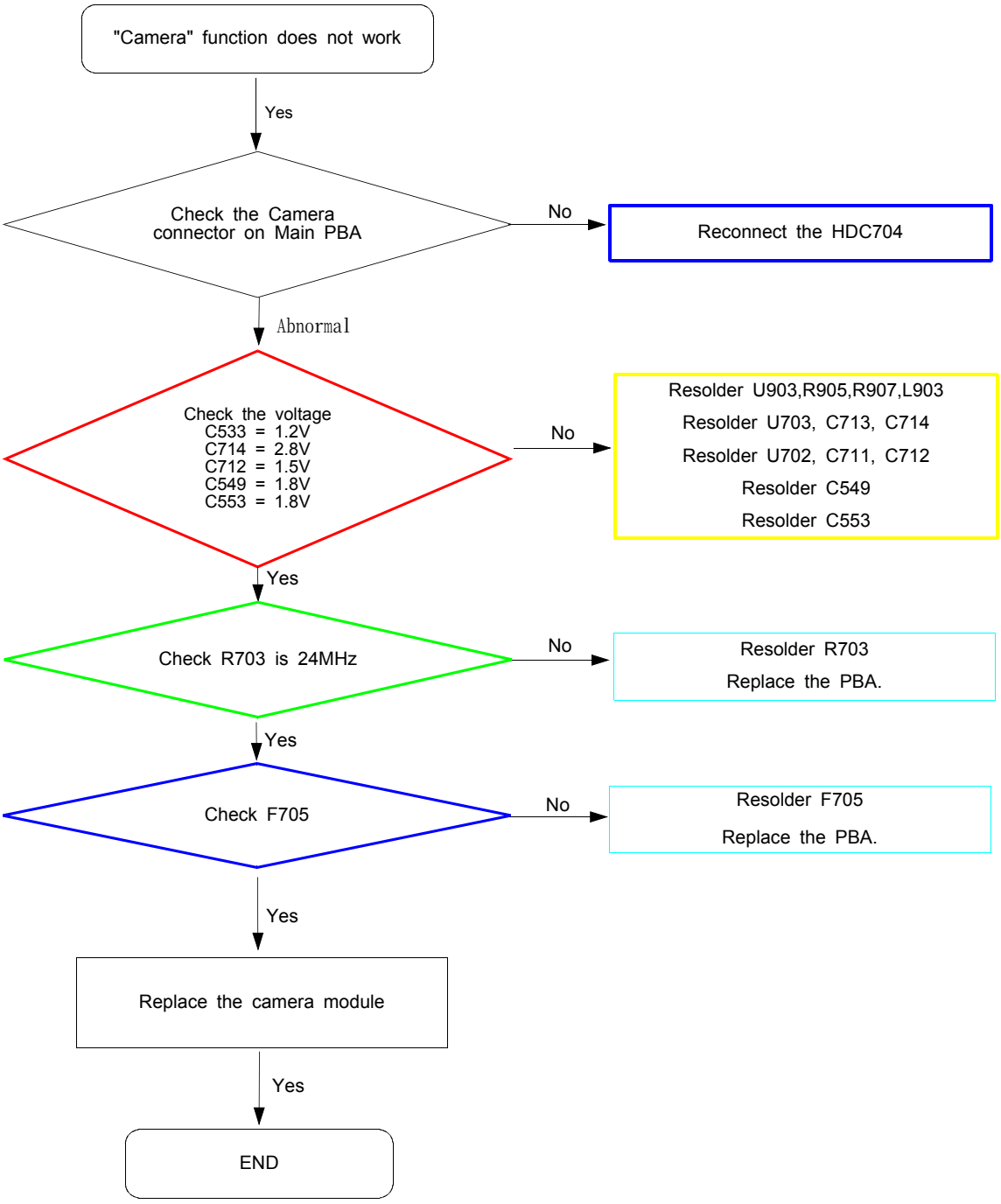
8-3-13. 2M CAM



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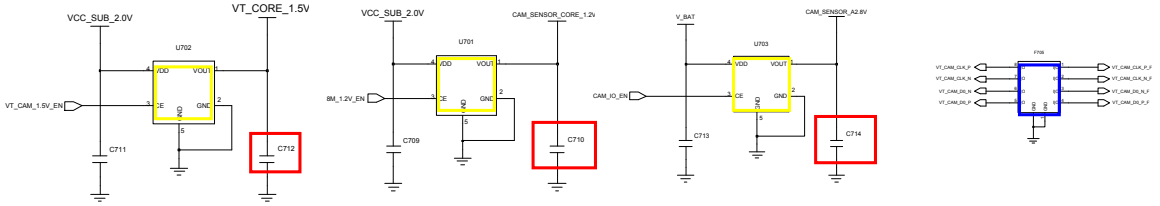

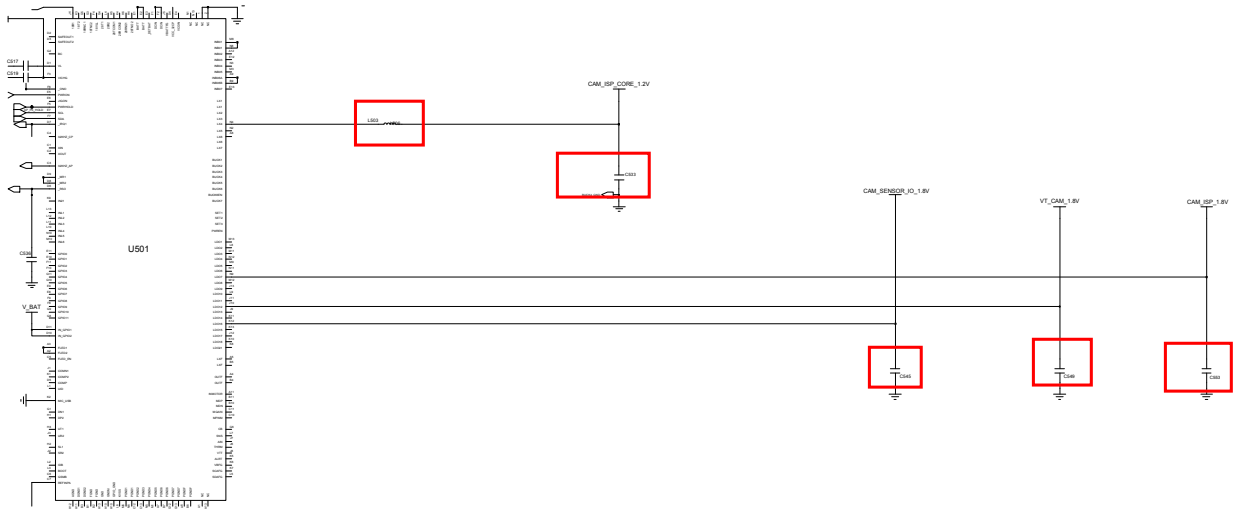

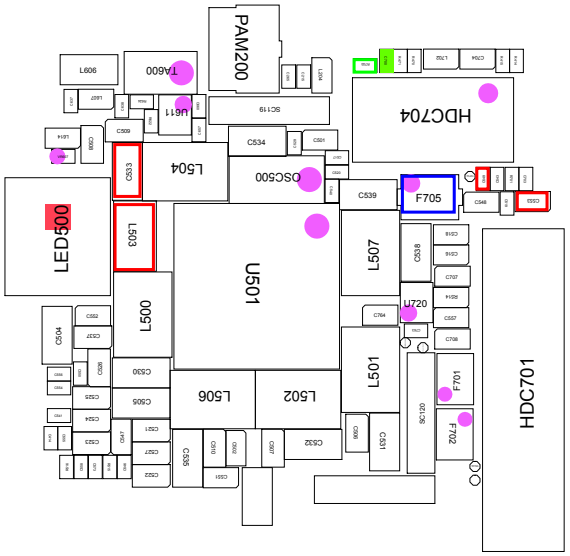

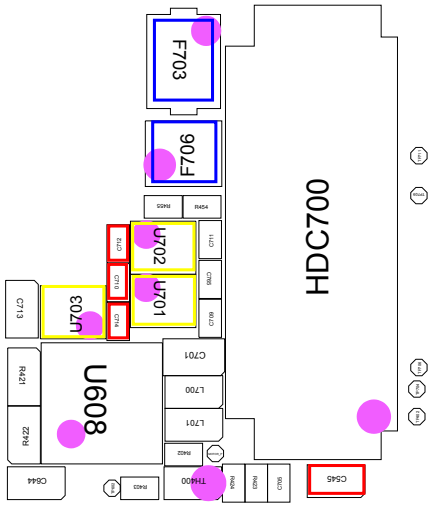

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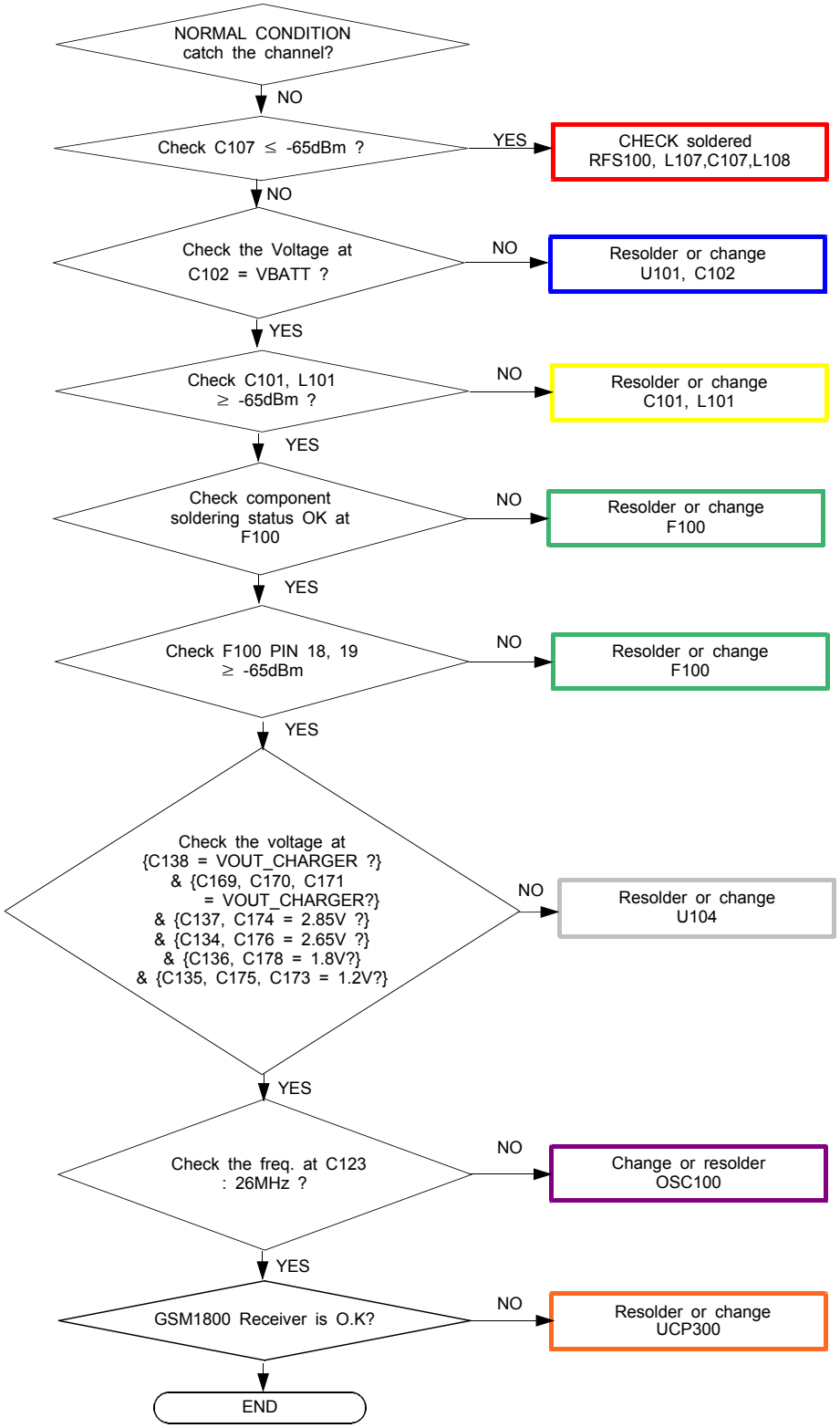
8-3-12. GSM1800 RX



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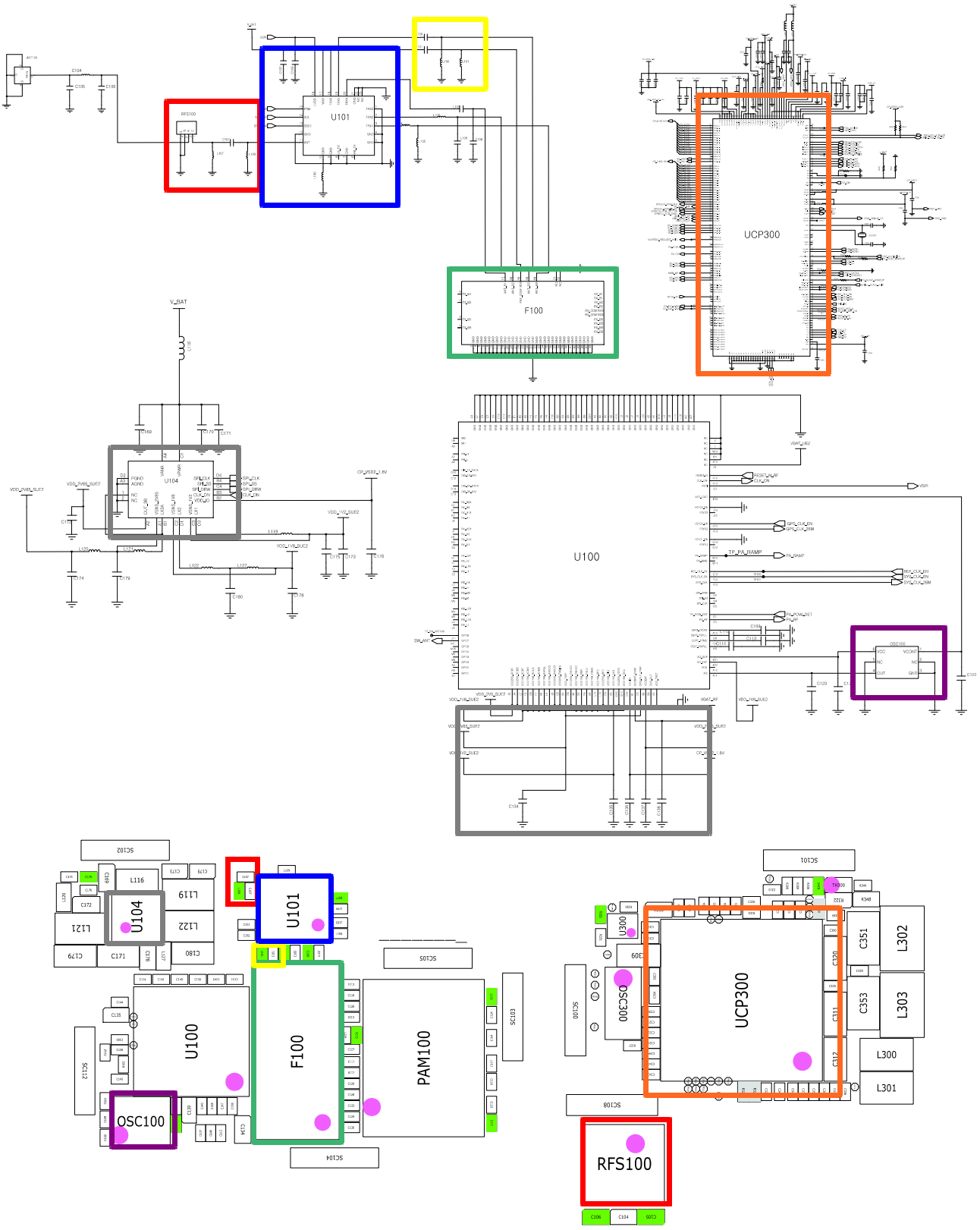

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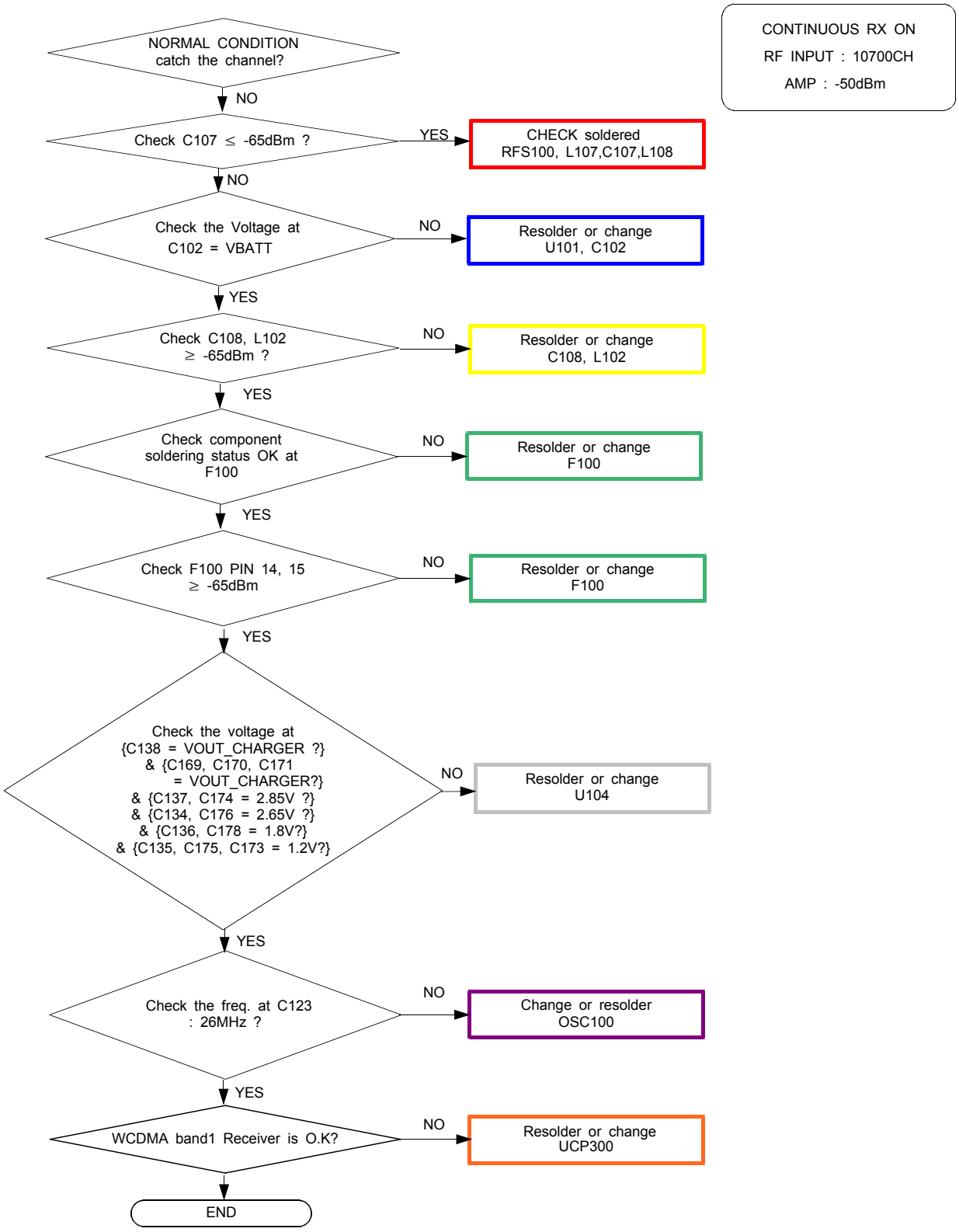
8-3-13. WCDMA Band1 RX


CONTINUOUS RX ON
RF INPUT : 10700CH
AMP : -50dBm
NORMAL CONDITION catch the channel?
NO
Check C107 ≤ -65dBm ?
YES
CHECK soldered RFS100, L107,C107,L108
NO
Check the Voltage at C102 = VBATT
NO
Resolder or change U101, C102
YES
Check C108, L102 ≥ -65dBm ?
NO
Resolder or change C108, L102
YES
Check component soldering status OK at F100
NO
Resolder or change F100
YES
Check F100 PIN 14, 15 ≥ -65dBm
NO
Resolder or change F100
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES
WCDMA band1 Receiver is O.K?
NO
Resolder or change UCP300
END

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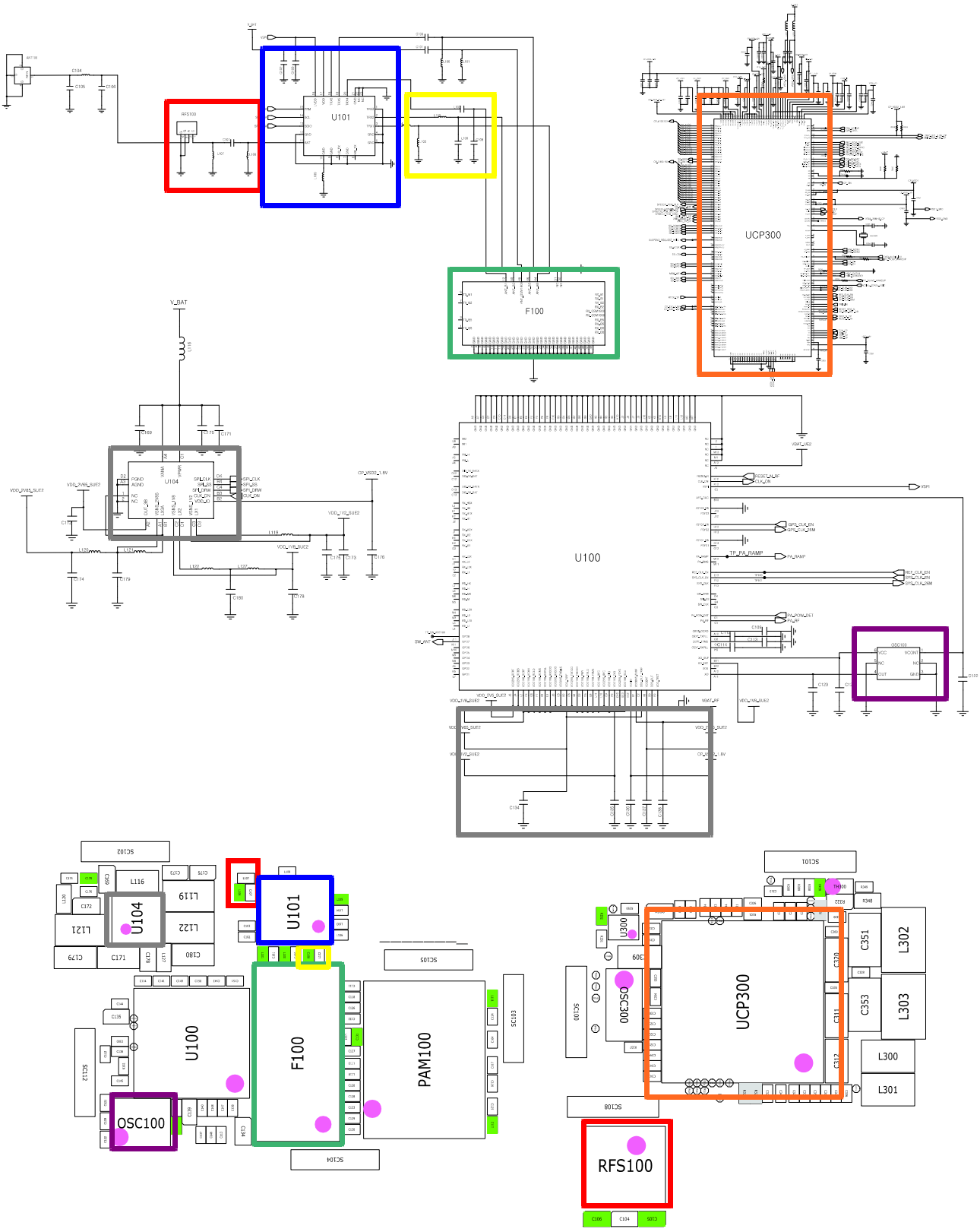

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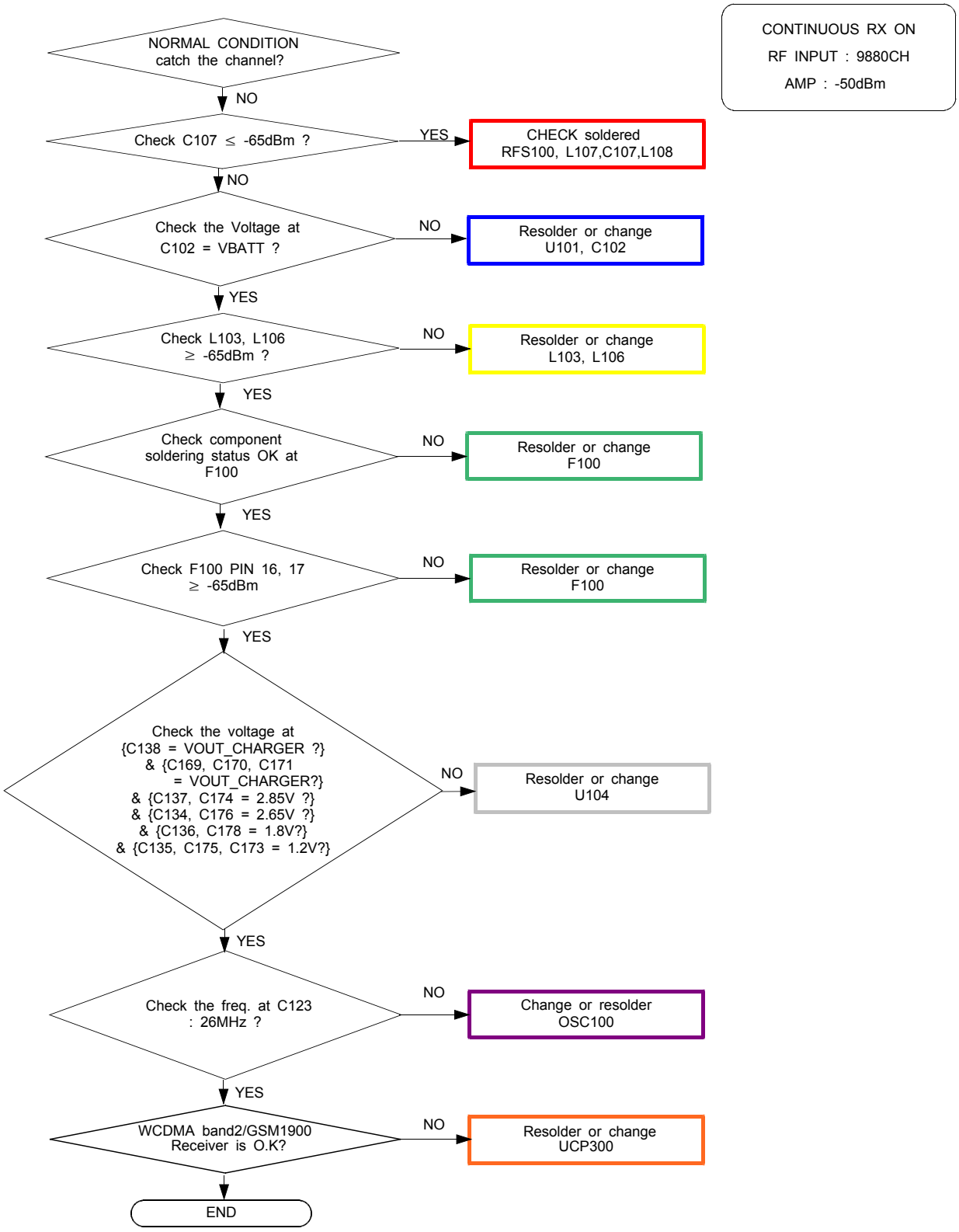
8-3-14. WCDMA Band2 / GSM1900 RX


CONTINUOUS RX ON
RF INPUT : 9880CH
AMP : -50dBm
NORMAL CONDITION catch the channel?
NO
Check C107 ≤ -65dBm ?
YES
CHECK soldered RFS100, L107,C107,L108
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check L103, L106 ≥ -65dBm ?
NO
Resolder or change L103, L106
YES
Check component soldering status OK at F100
NO
Resolder or change F100
YES
Check F100 PIN 16, 17 ≥ -65dBm
NO
Resolder or change F100
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES
WCDMA band2/GSM1900 Receiver is O.K?
NO
Resolder or change UCP300
END

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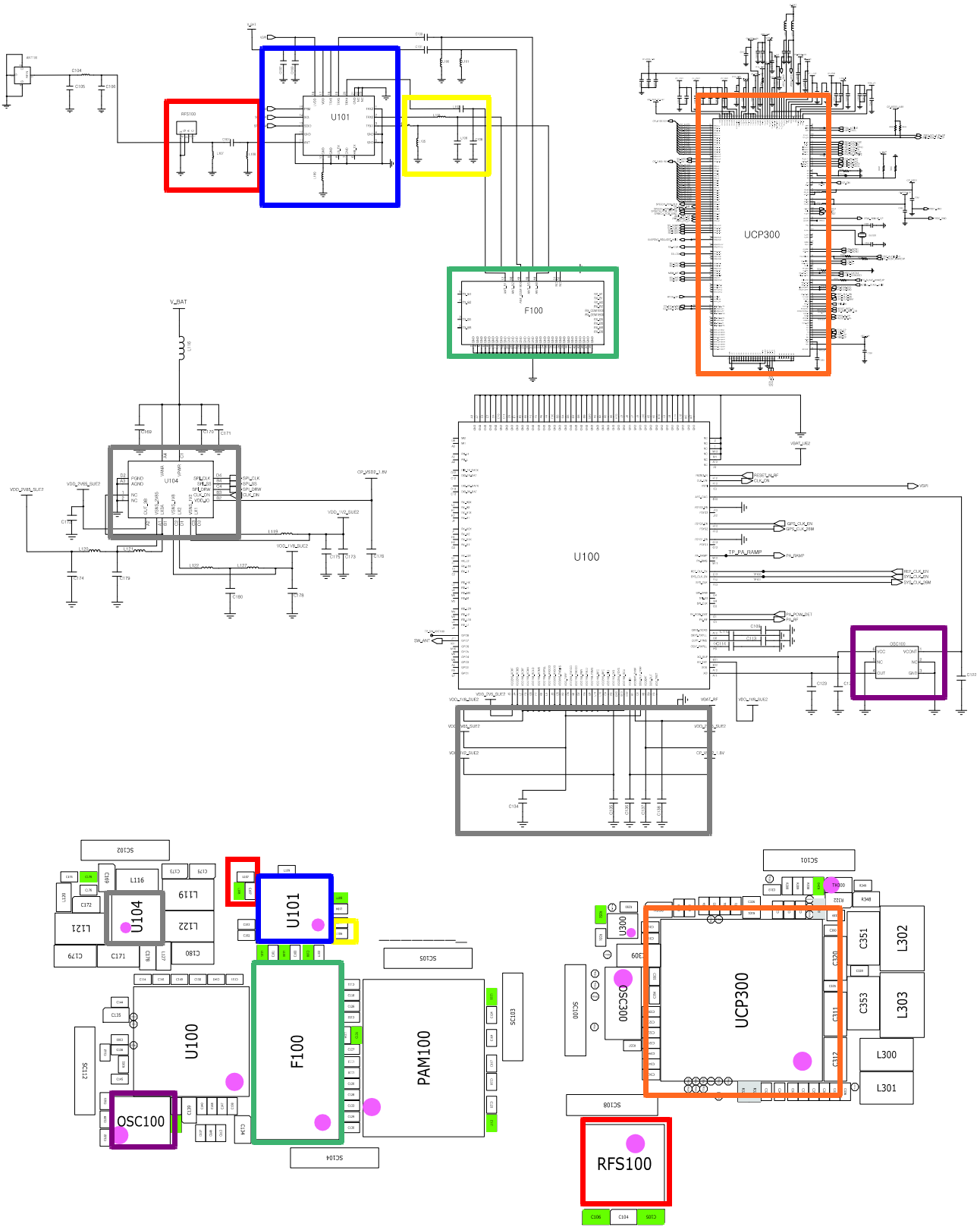

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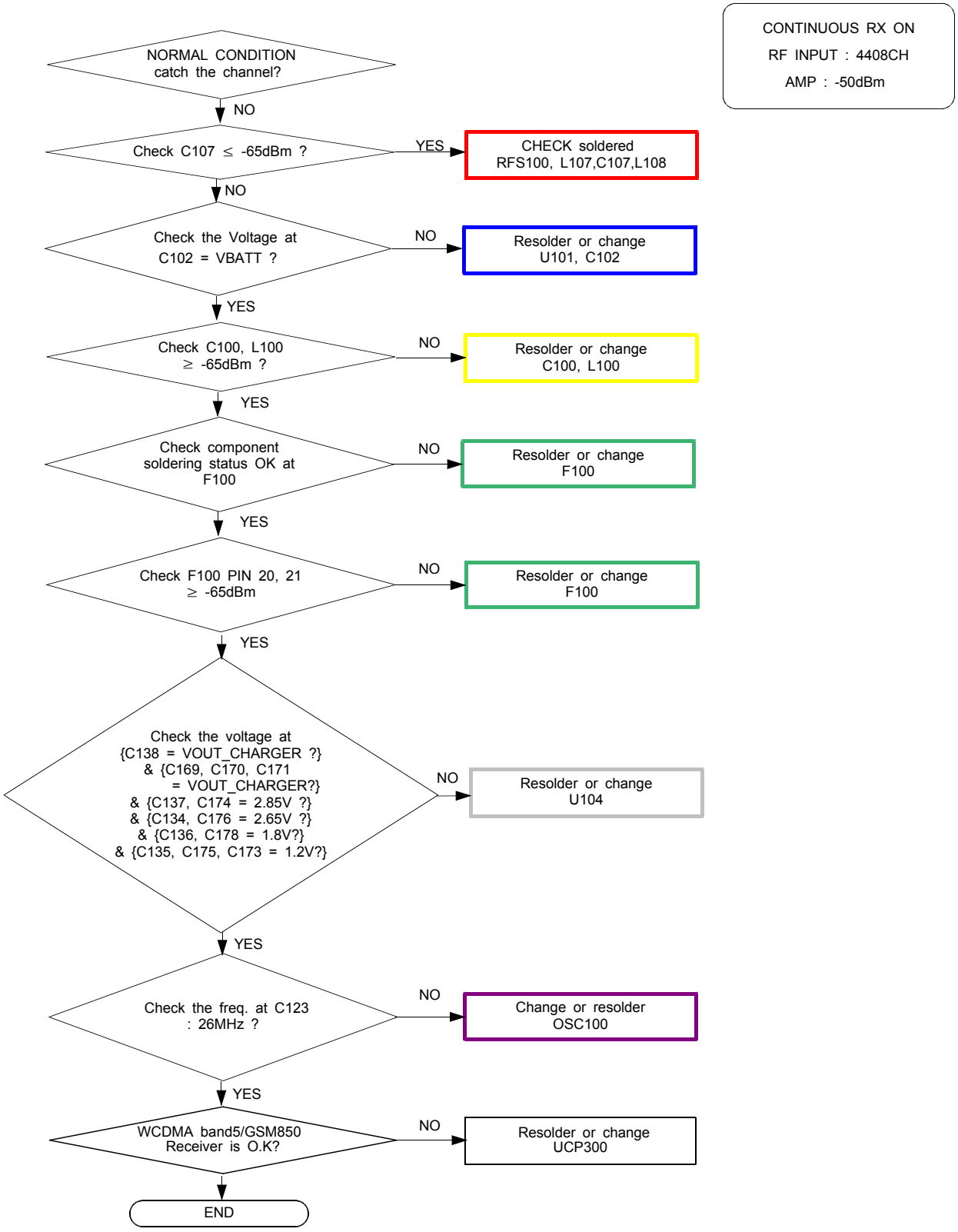
8-3-15. WCDMA Band5 / GSM 850 RX


CONTINUOUS RX ON
RF INPUT : 4408CH
AMP : -50dBm
NORMAL CONDITION catch the channel?
NO
Check C107 ≤ -65dBm ?
YES
CHECK soldered RFS100, L107,C107,L108
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check C100, L100 ≥ -65dBm ?
NO
Resolder or change C100, L100
YES
Check component soldering status OK at F100
NO
Resolder or change F100
YES
Check F100 PIN 20, 21 ≥ -65dBm
NO
Resolder or change F100
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES
WCDMA band5/GSM850 Receiver is O.K?
NO
Resolder or change UCP300
END

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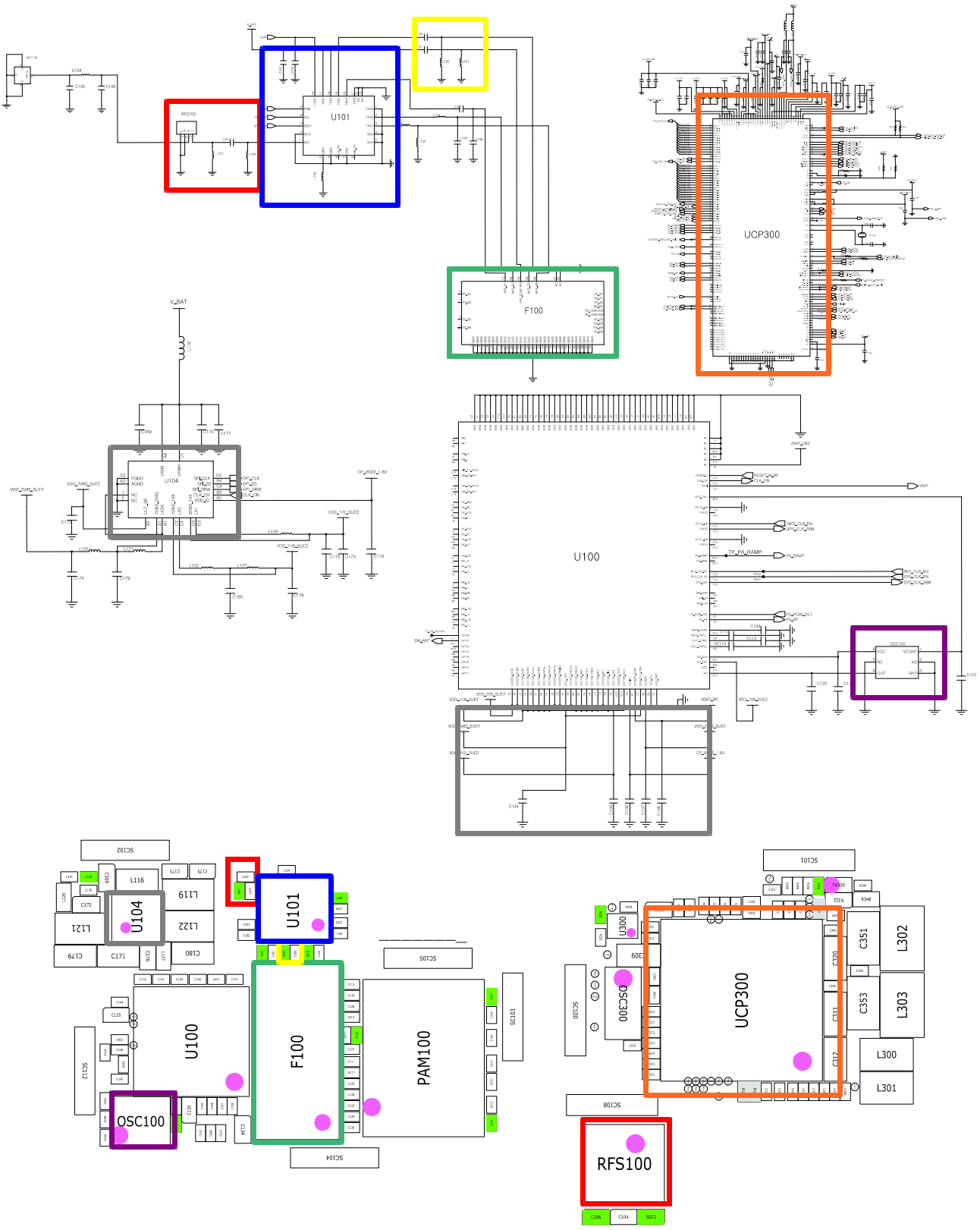

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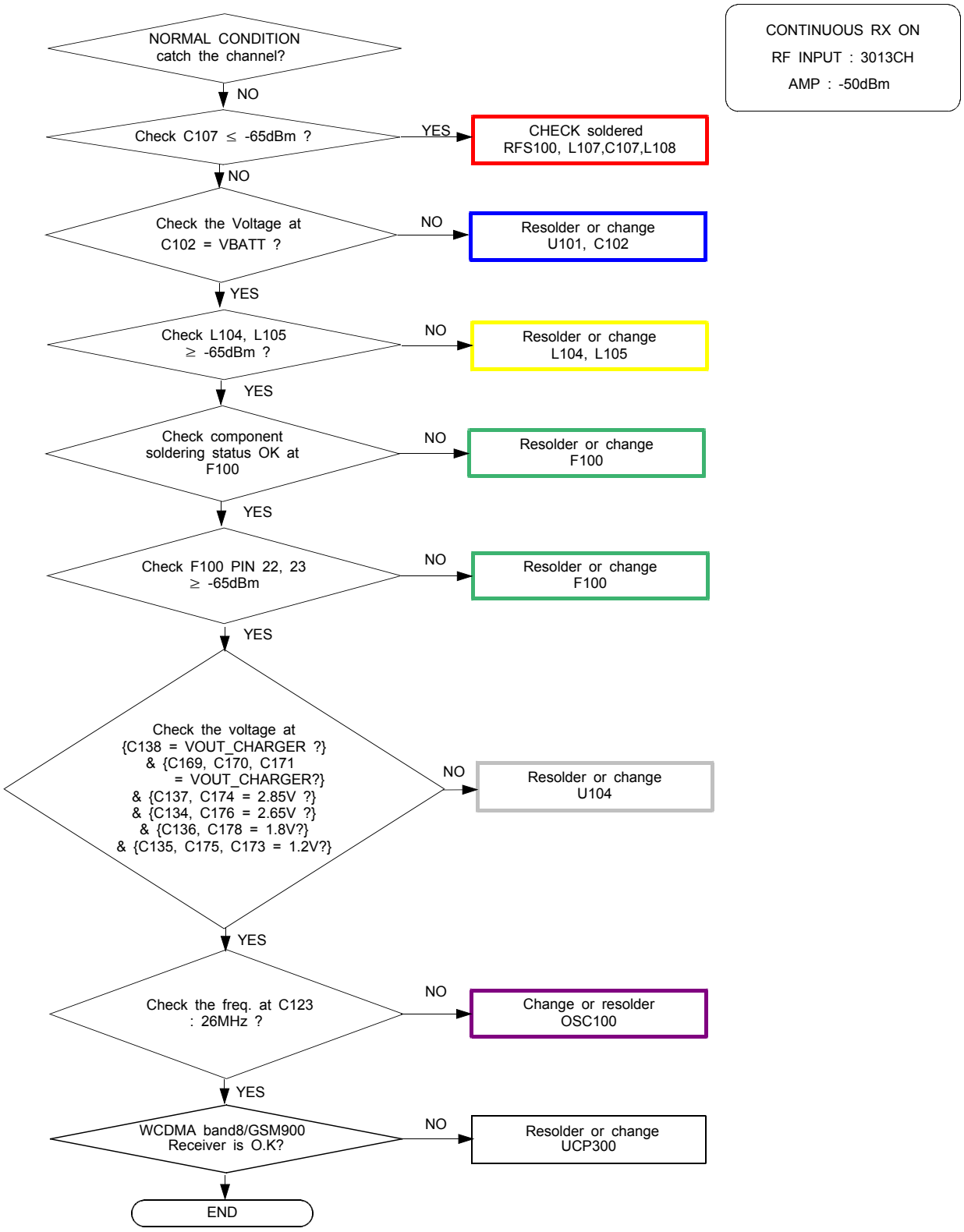
8-3-16. WCDMA Band8 / GSM900 RX


CONTINUOUS RX ON
RF INPUT : 3013CH
AMP : -50dBm
NORMAL CONDITION catch the channel?
NO
Check C107 ≤ -65dBm ?
YES
CHECK soldered RFS100, L107,C107,L108
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check L104, L105 ≥ -65dBm ?
NO
Resolder or change L104, L105
YES
Check component soldering status OK at F100
NO
Resolder or change F100
YES
Check F100 PIN 22, 23 ≥ -65dBm
NO
Resolder or change F100
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES
WCDMA band8/GSM900 Receiver is O.K?
NO
Resolder or change UCP300
END

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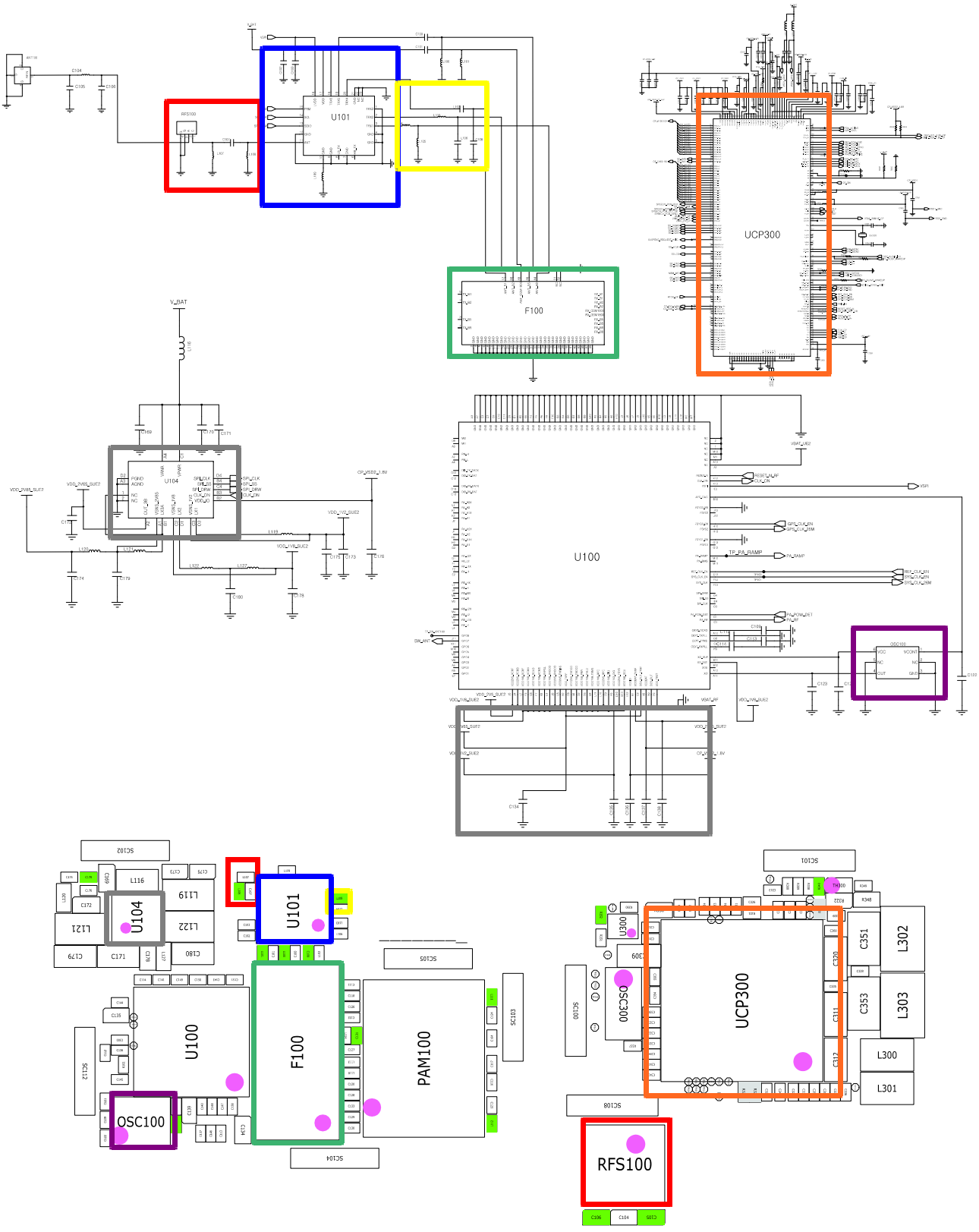

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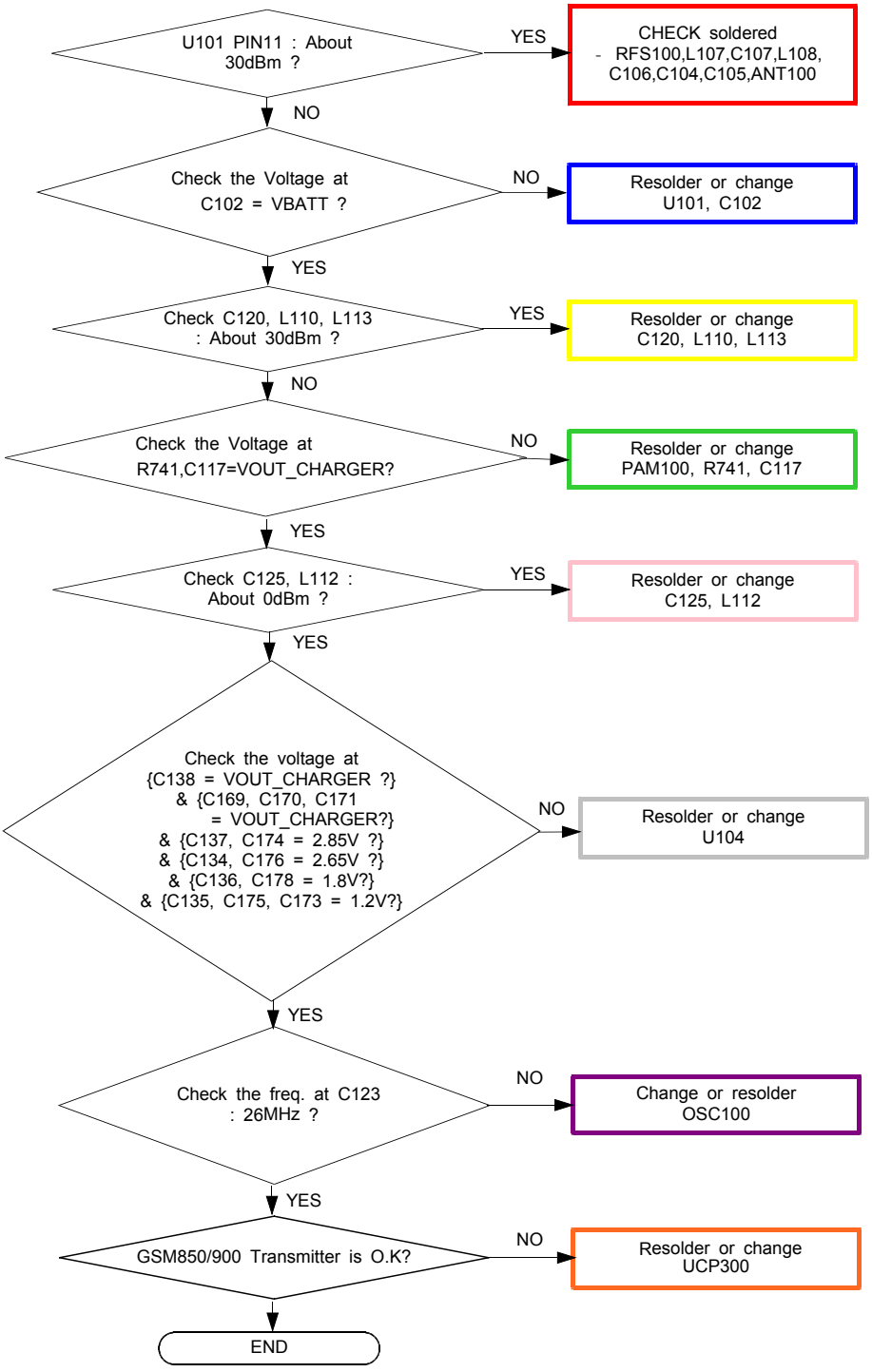
8-3-17. GSM850/GSM900 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
GSM850 CH : 190
GSM900 CH : 62
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB


U101 PIN11 : About 30dBm ?
YES
CHECK soldered
- RFS100,L107,C107,L108, C106,C104,C105,ANT100
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check C120, L110, L113 : About 30dBm ?
YES
Resolder or change C120, L110, L113
NO
Check the Voltage at R741,C117=VOUT_CHARGER?
NO
Resolder or change PAM100, R741, C117
YES
Check C125, L112 : About 0dBm ?
YES
Resolder or change C125, L112
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES
GSM850/900 Transmitter is O.K?
NO
Resolder or change UCP300
END

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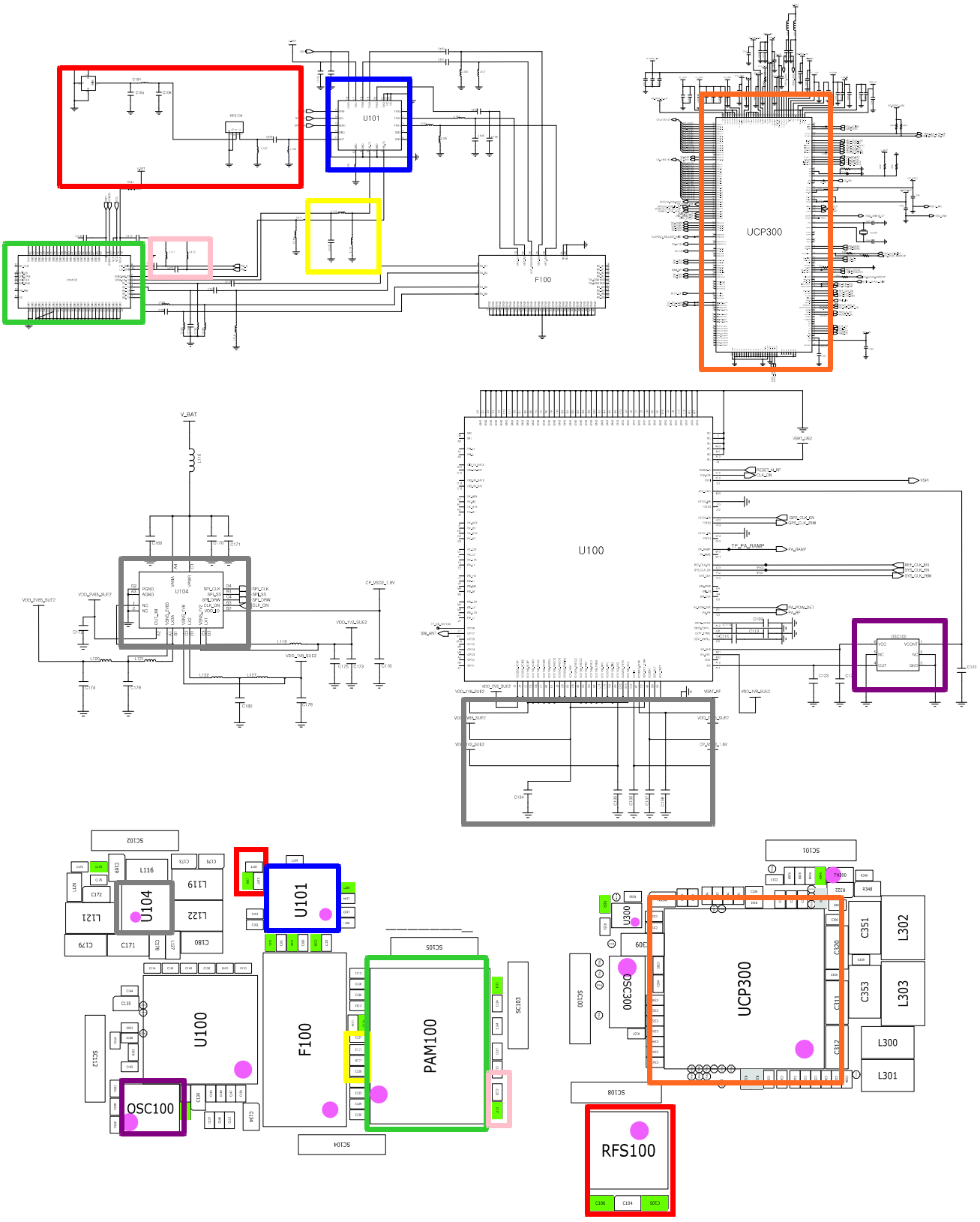

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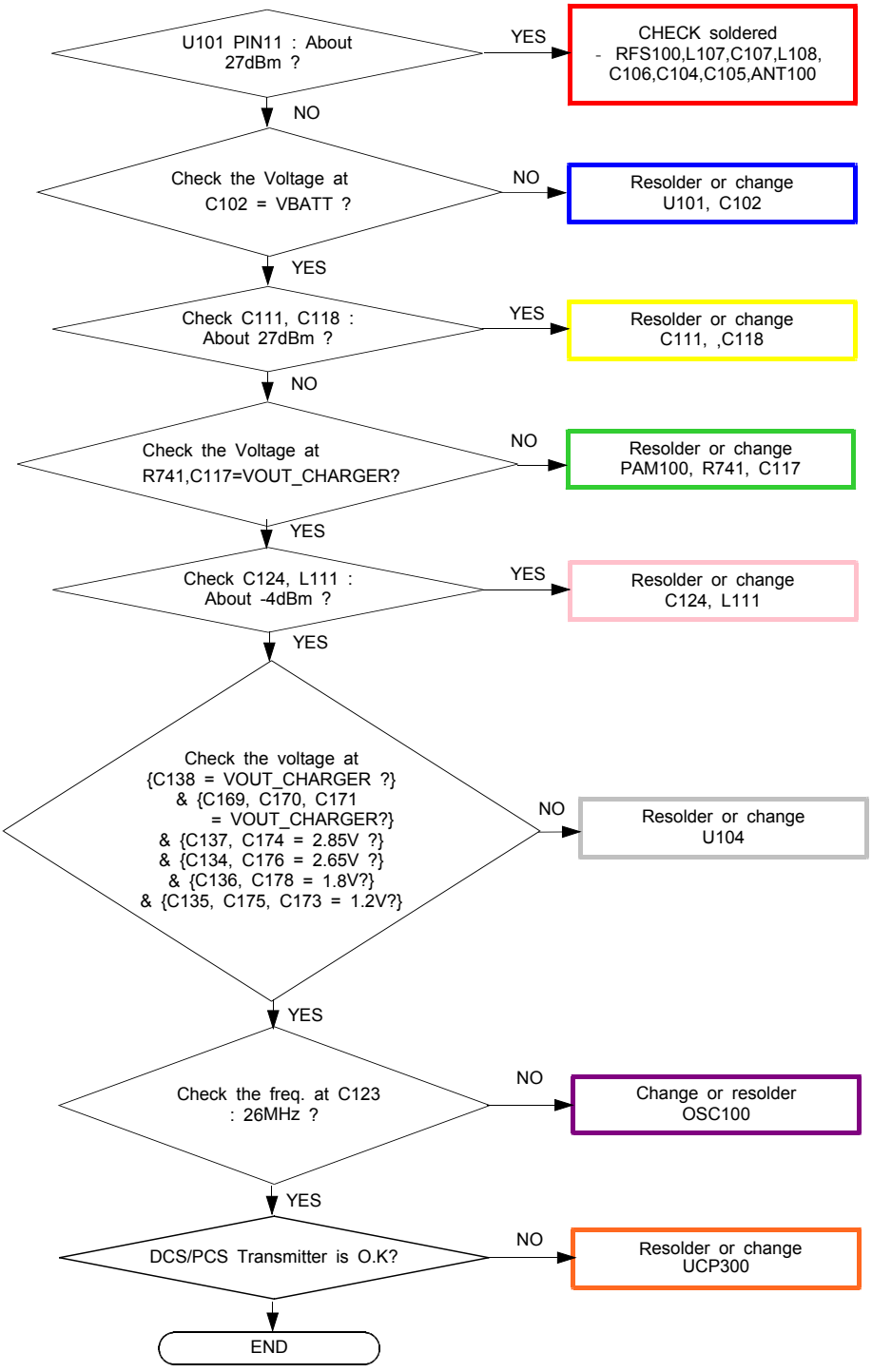
8-3-18. DCS/PCS TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
DCS CH : 685
PCS CH : 661
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB


U101 PIN11 : About 27dBm ?
YES
CHECK soldered
- RFS100,L107,C107,L108, C106,C104,C105,ANT100
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check C111, C118 : About 27dBm ?
YES
Resolder or change C111, ,C118
NO
Check the Voltage at R741,C117=VOUT_CHARGER?
NO
Resolder or change PAM100, R741, C117
YES
Check C124, L111 : About -4dBm ?
YES
Resolder or change C124, L111
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES
DCS/PCS Transmitter is O.K?
NO
Resolder or change UCP300
END

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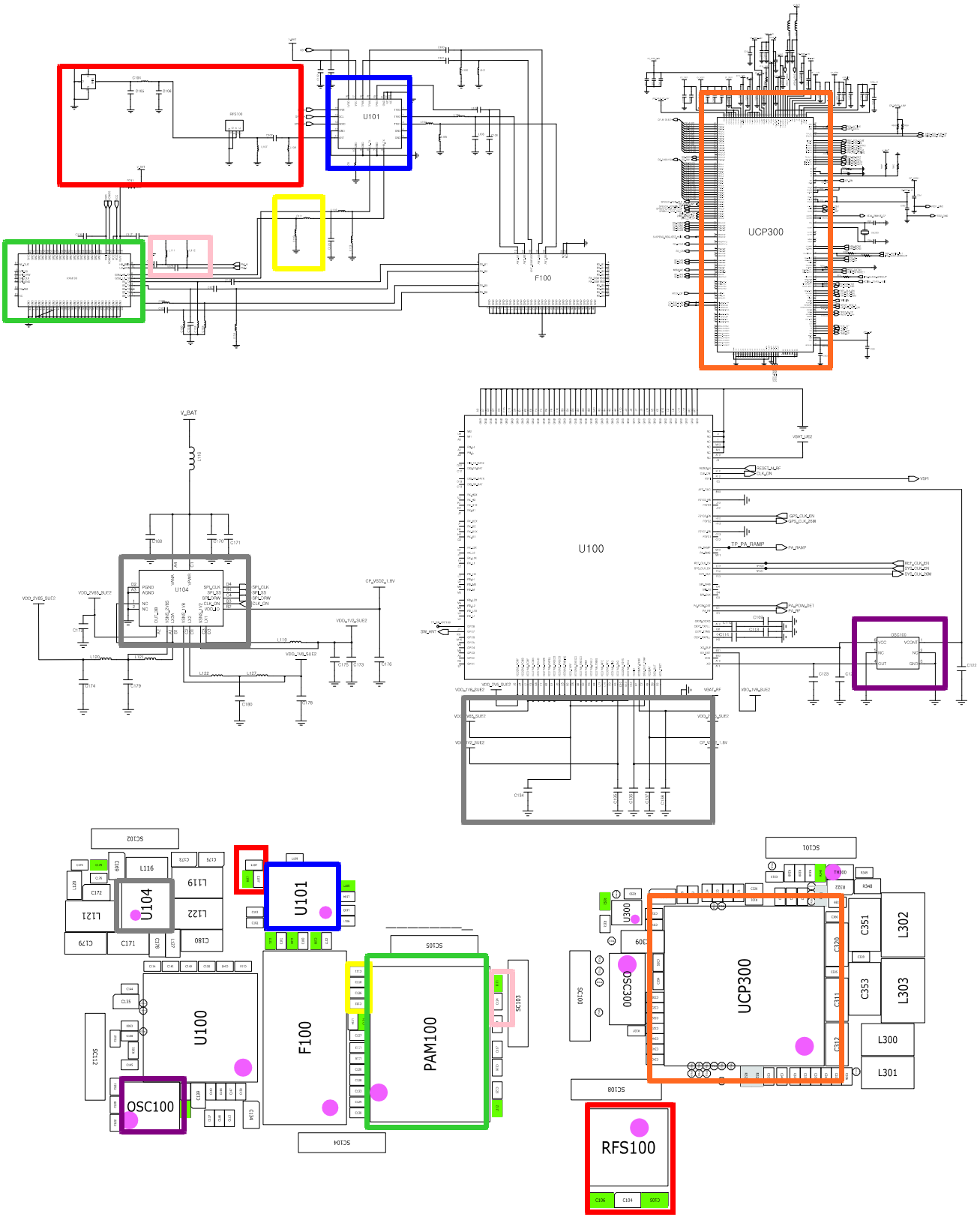

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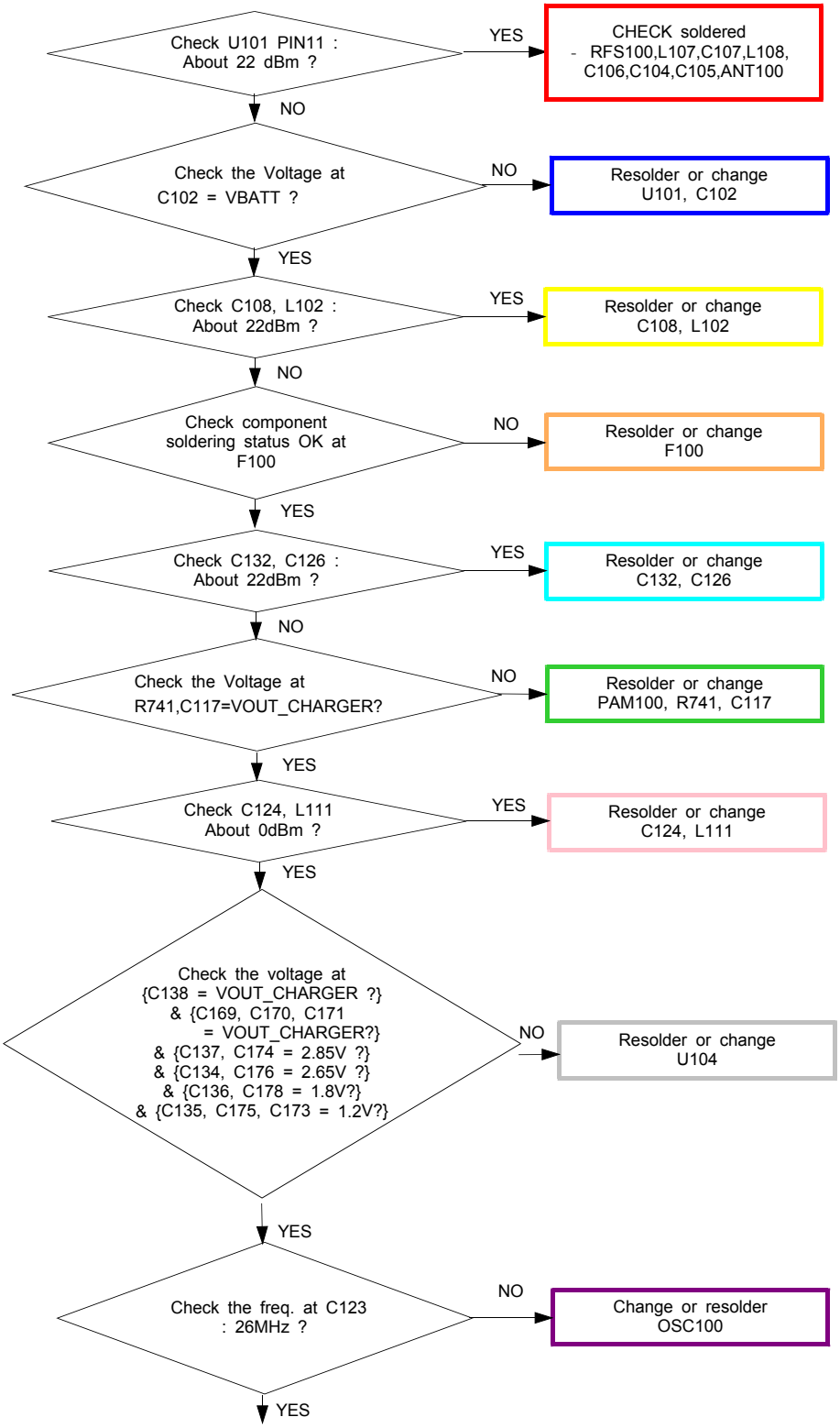
8-3-19. WCDMA BAND1 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band1 CH : 10700
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB


Check U101 PIN11 : About 22 dBm ?
YES
CHECK soldered
- RFS100,L107,C107,L108, C106,C104,C105,ANT100
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check C108, L102 : About 22dBm ?
YES
Resolder or change C108, L102
NO
Check component soldering status OK at F100
NO
Resolder or change F100
YES
Check C132, C126 : About 22dBm ?
YES
Resolder or change C132, C126
NO
Check the Voltage at R741,C117=VOUT_CHARGER?
NO
Resolder or change PAM100, R741, C117
YES
Check C124, L111 About 0dBm ?
YES
Resolder or change C124, L111
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES

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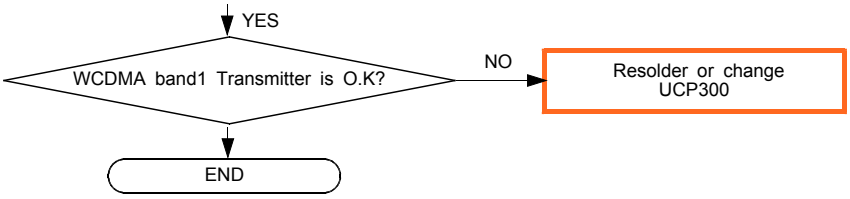

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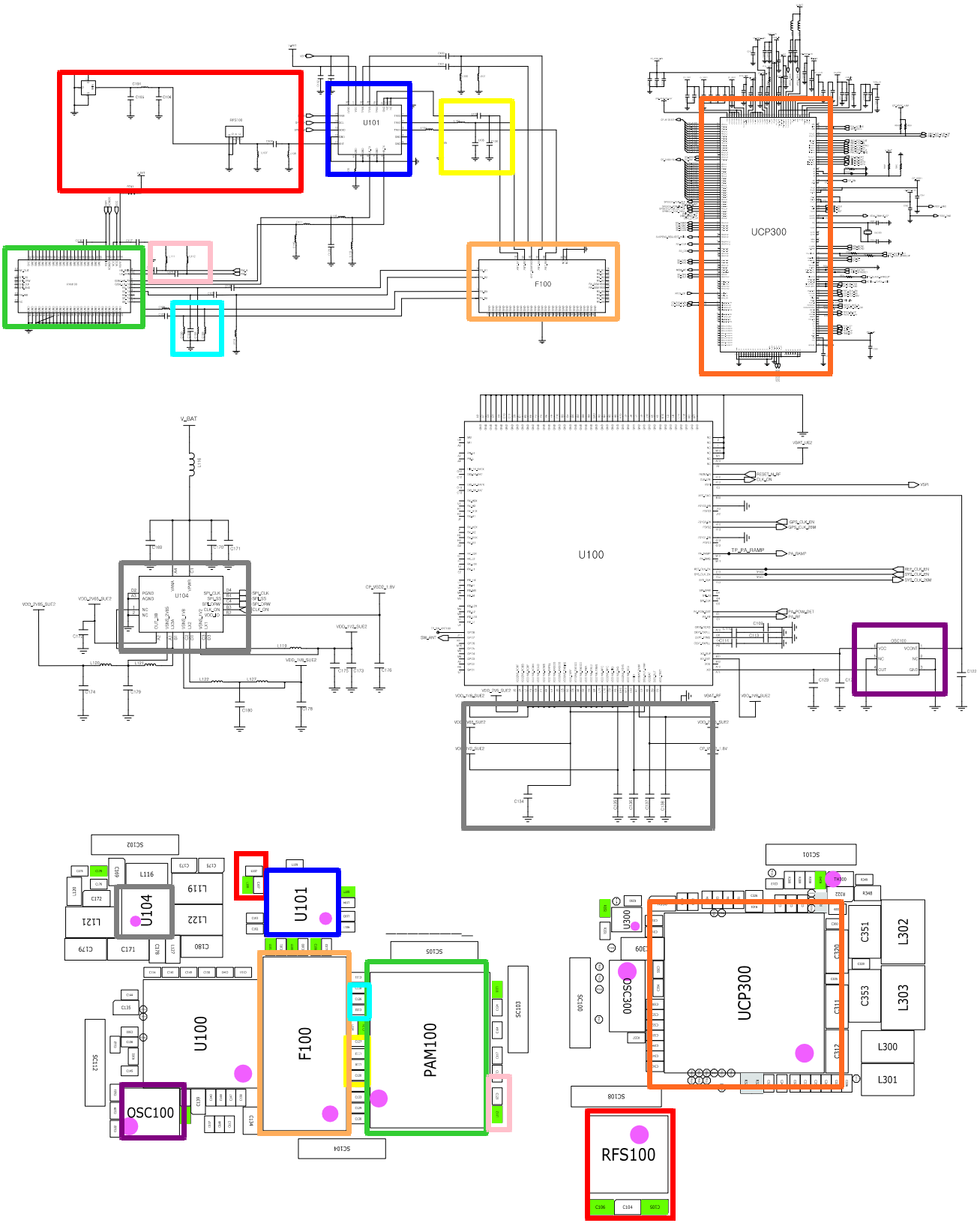

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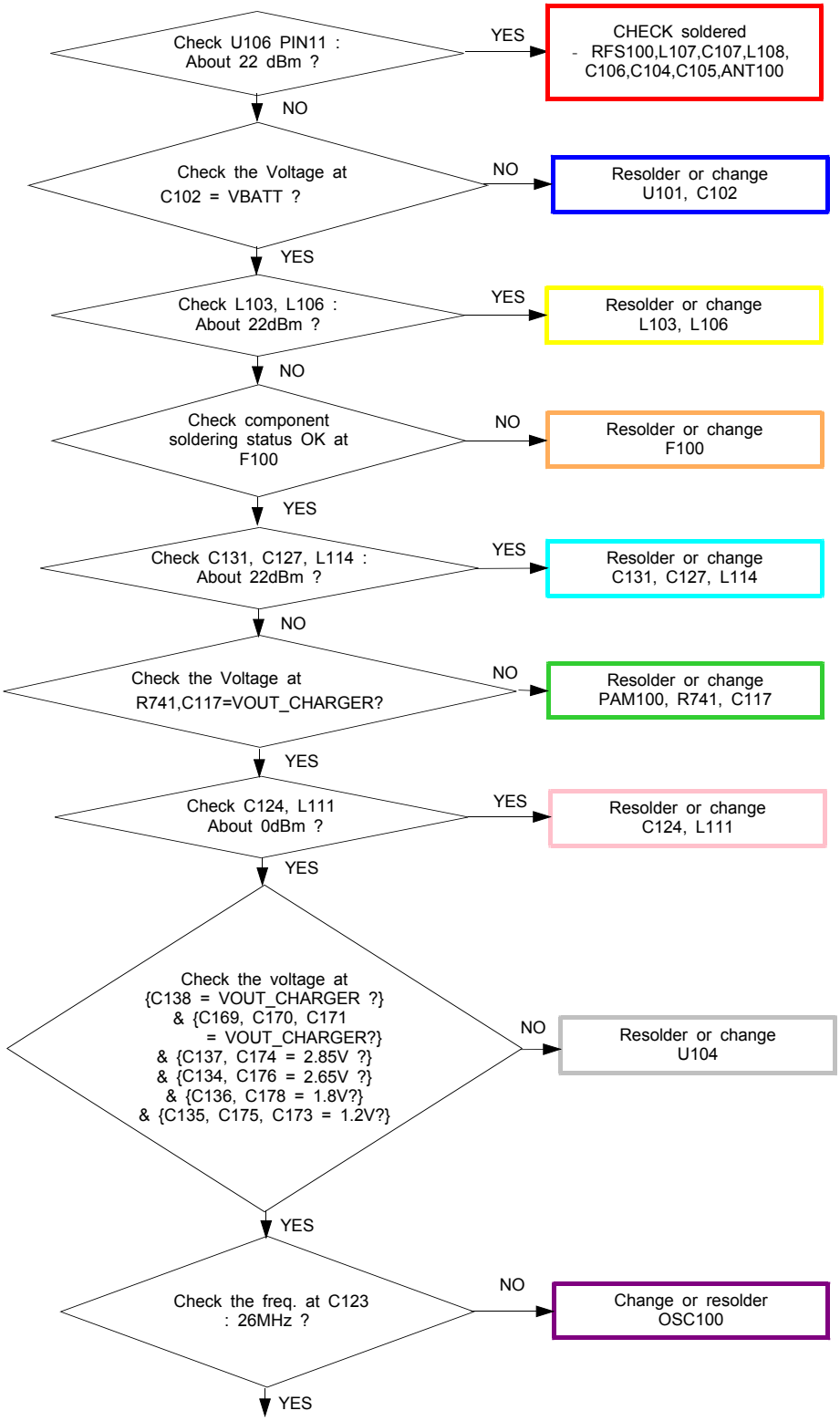
8-3-20. WCDMA BAND2 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band2 CH : 9880
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB


Check U106 PIN11 : About 22 dBm ?
YES
CHECK soldered
- RFS100,L107,C107,L108, C106,C104,C105,ANT100
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check L103, L106 : About 22dBm ?
YES
Resolder or change L103, L106
NO
Check component soldering status OK at F100
NO
Resolder or change F100
YES
Check C131, C127, L114 : About 22dBm ?
YES
Resolder or change C131, C127, L114
NO
Check the Voltage at R741,C117=VOUT_CHARGER?
NO
Resolder or change PAM100, R741, C117
YES
Check C124, L111 About 0dBm ?
YES
Resolder or change C124, L111
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES

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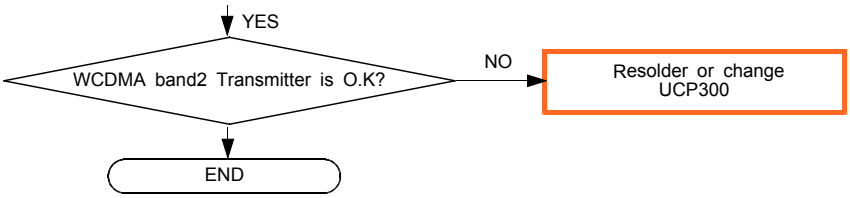

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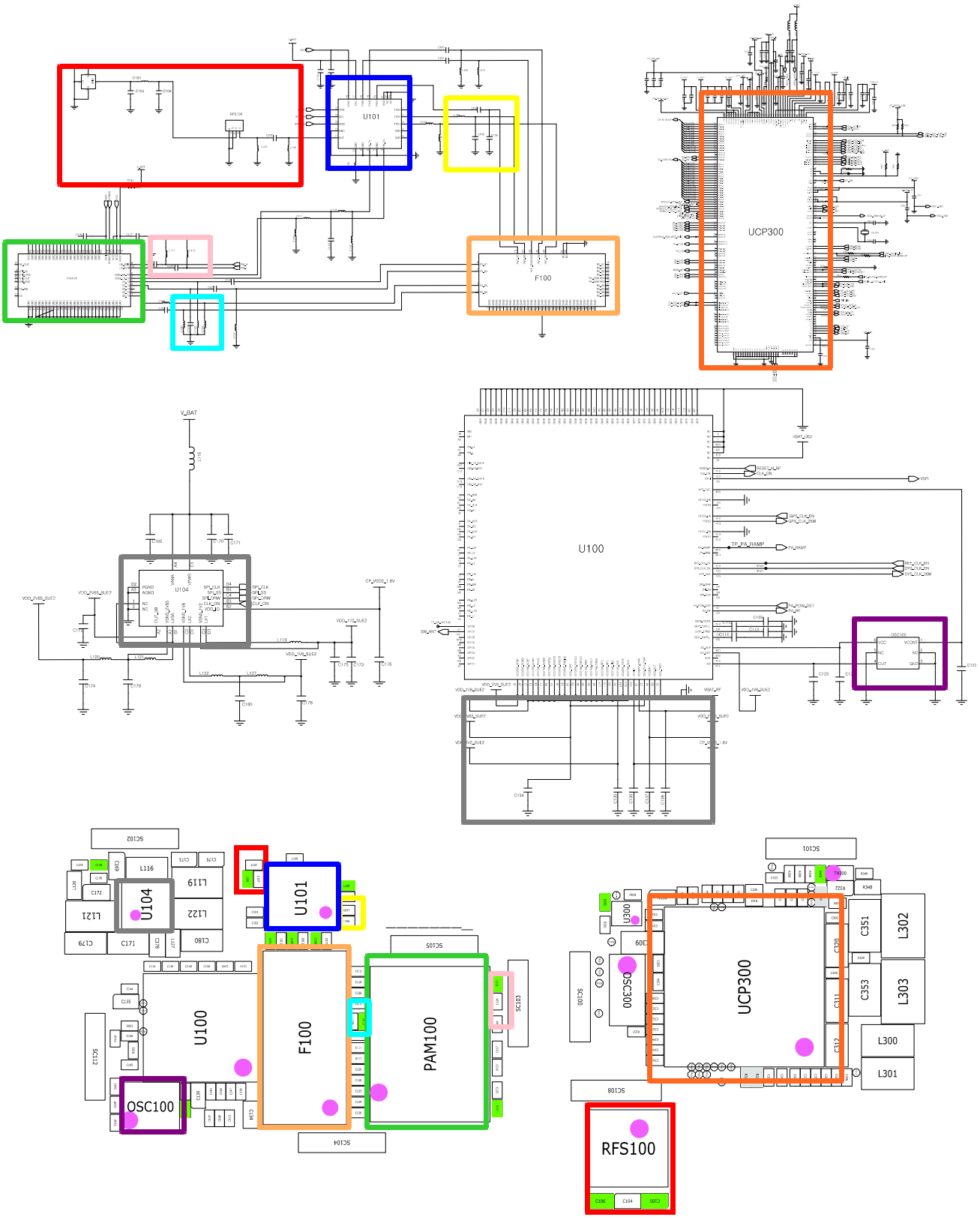

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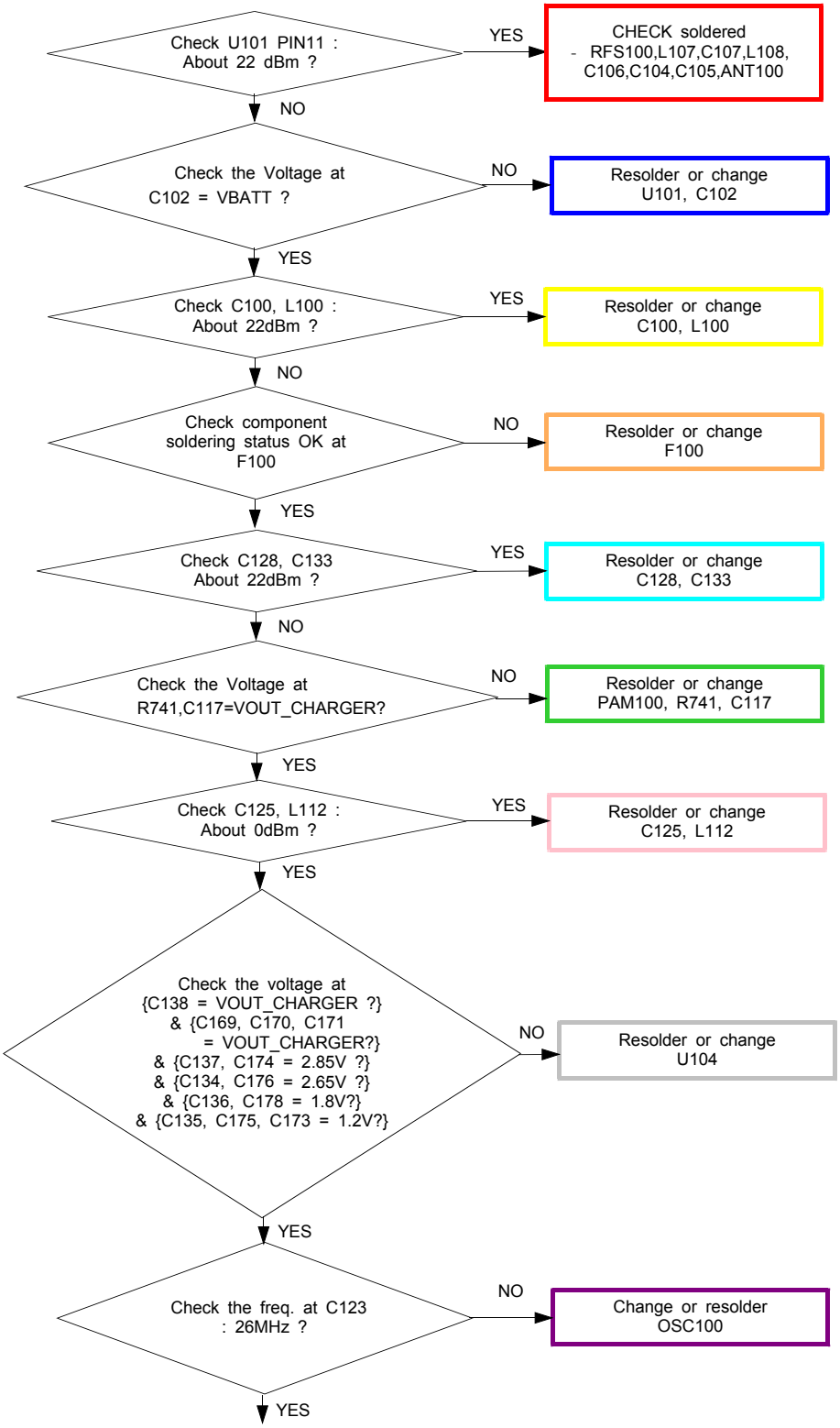
8-3-21. WCDMA BAND5 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band5 CH : 4408
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB


Check U101 PIN11 : About 22 dBm ?
YES
CHECK soldered
- RFS100,L107,C107,L108, C106,C104,C105,ANT100
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check C100, L100 : About 22dBm ?
YES
Resolder or change C100, L100
NO
Check component soldering status OK at F100
NO
Resolder or change F100
YES
Check C128, C133 About 22dBm ?
YES
Resolder or change C128, C133
NO
Check the Voltage at R741,C117=VOUT_CHARGER?
NO
Resolder or change PAM100, R741, C117
YES
Check C125, L112 : About 0dBm ?
YES
Resolder or change C125, L112
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES

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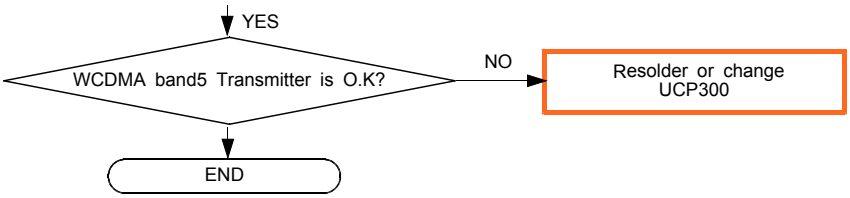

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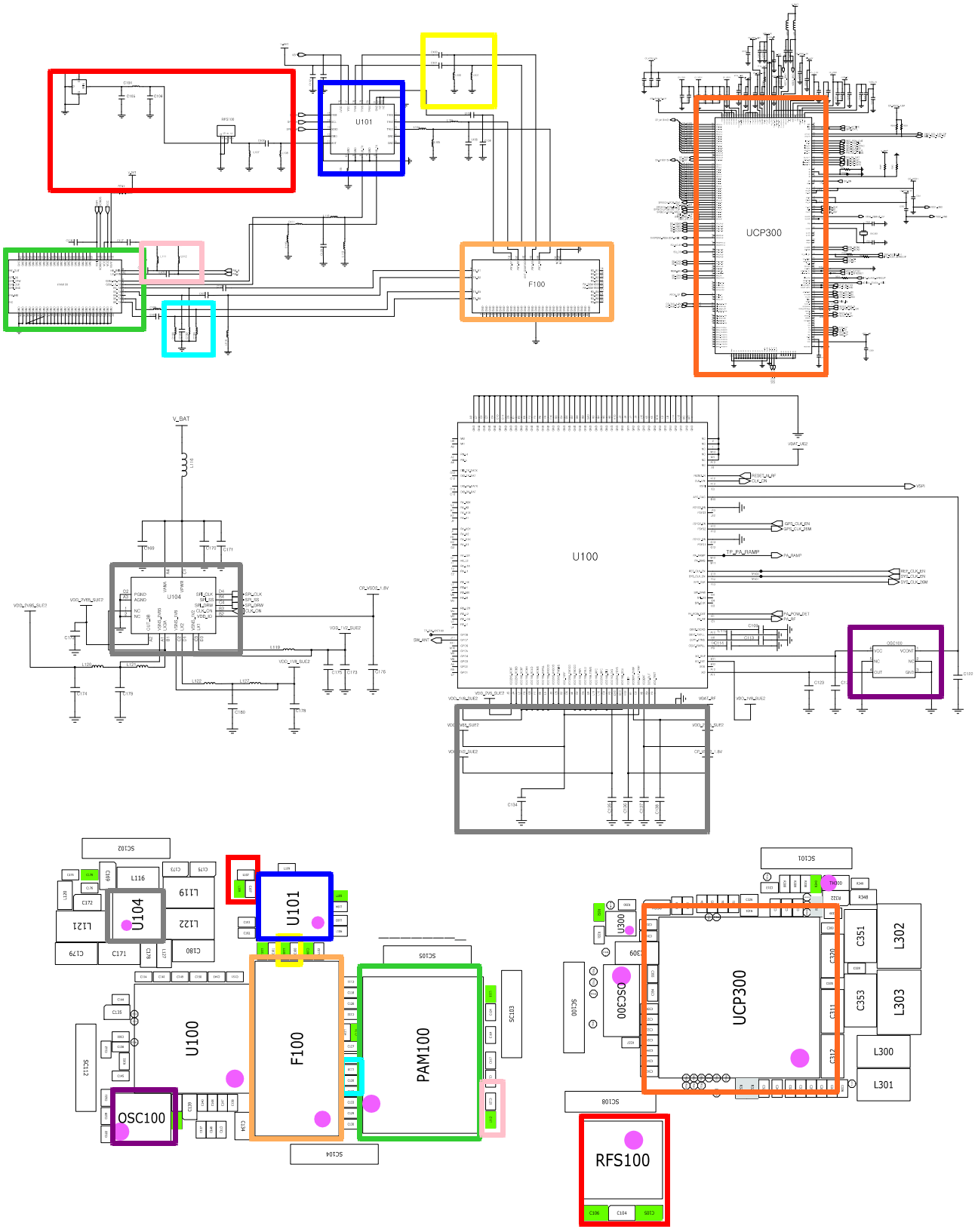

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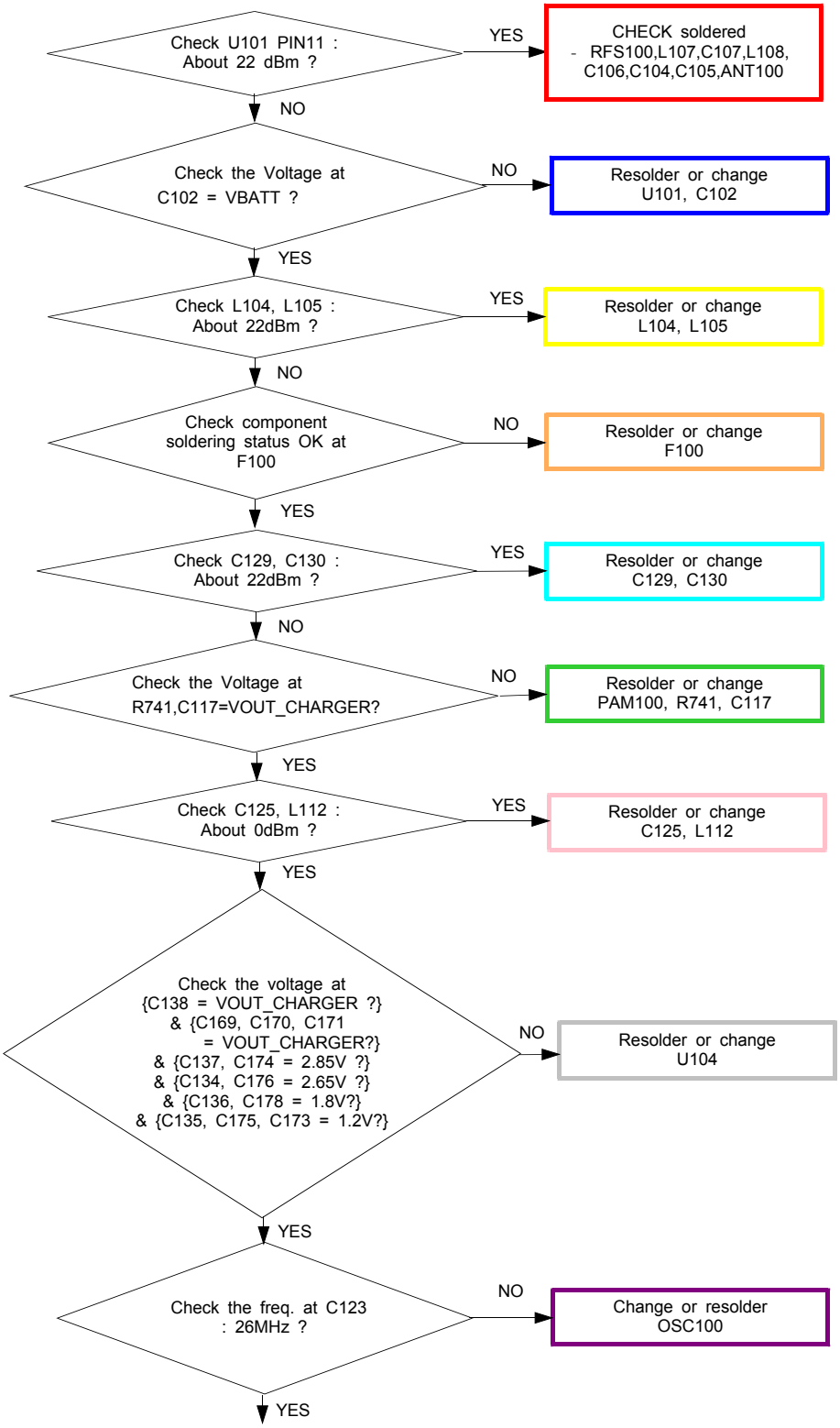
8-3-22. WCDMA BAND8 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band2 CH : 3013
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB


Check U101 PIN11 : About 22 dBm ?
YES
CHECK soldered
- RFS100,L107,C107,L108, C106,C104,C105,ANT100
NO
Check the Voltage at C102 = VBATT ?
NO
Resolder or change U101, C102
YES
Check L104, L105 : About 22dBm ?
YES
Resolder or change L104, L105
NO
Check component soldering status OK at F100
NO
Resolder or change F100
YES
Check C129, C130 : About 22dBm ?
YES
Resolder or change C129, C130
NO
Check the Voltage at R741,C117=VOUT_CHARGER?
NO
Resolder or change PAM100, R741, C117
YES
Check C125, L112 : About 0dBm ?
YES
Resolder or change C125, L112
YES
Check the voltage at {C138 = VOUT_CHARGER ?} & {C169, C170, C171 = VOUT_CHARGER?} & {C137, C174 = 2.85V ?} & {C134, C176 = 2.65V ?} & {C136, C178 = 1.8V?} & {C135, C175, C173 = 1.2V?}
NO
Resolder or change U104
YES
Check the freq. at C123 : 26MHz ?
NO
Change or resolder OSC100
YES

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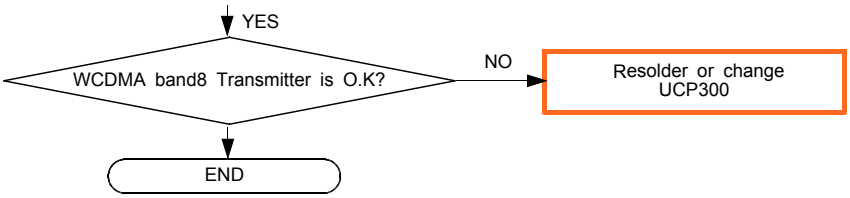

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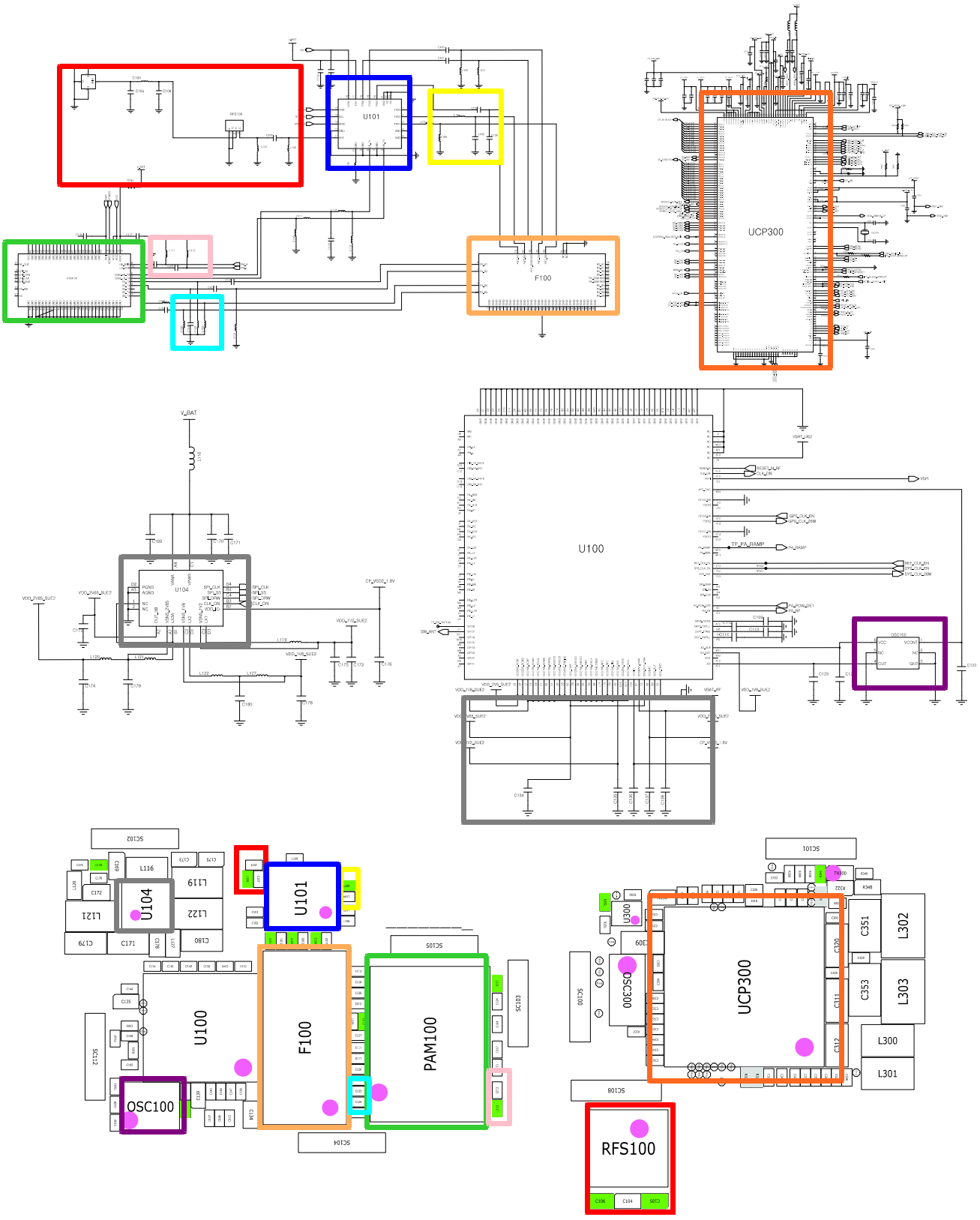

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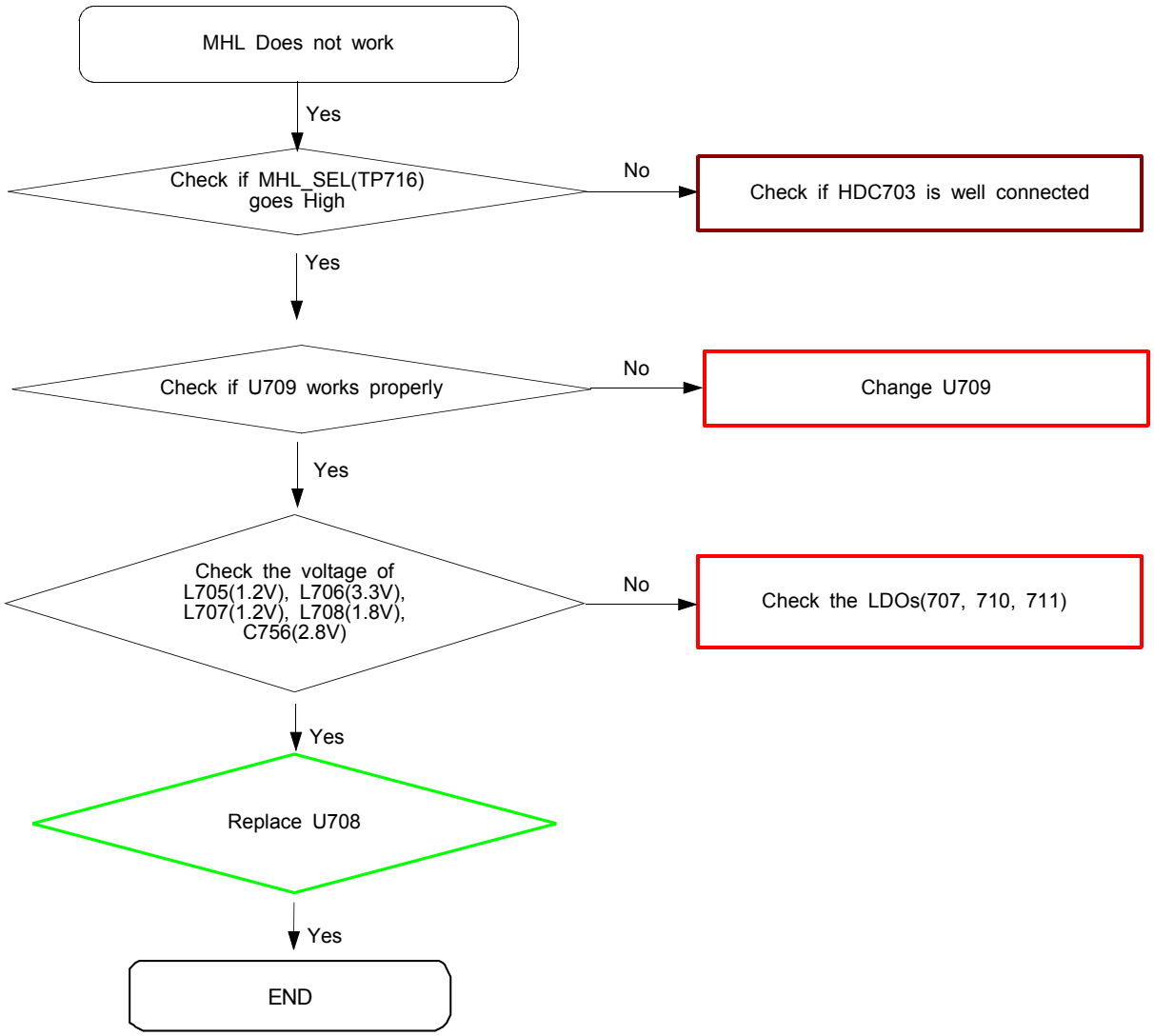
8-3-8. MHL



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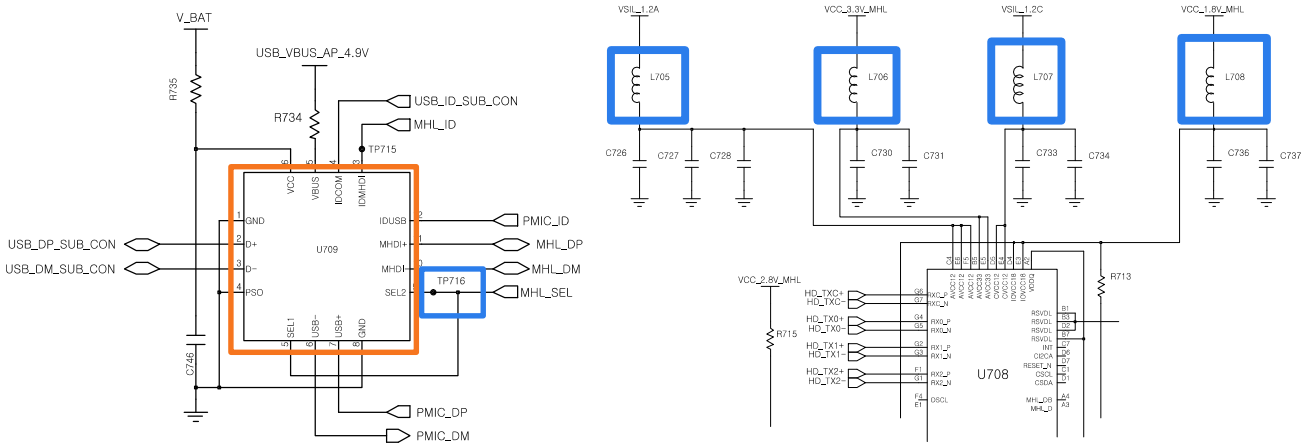
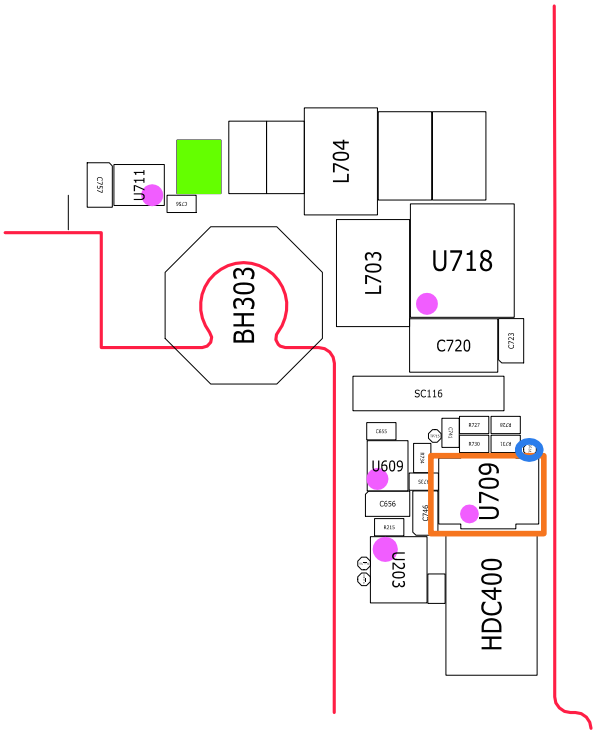
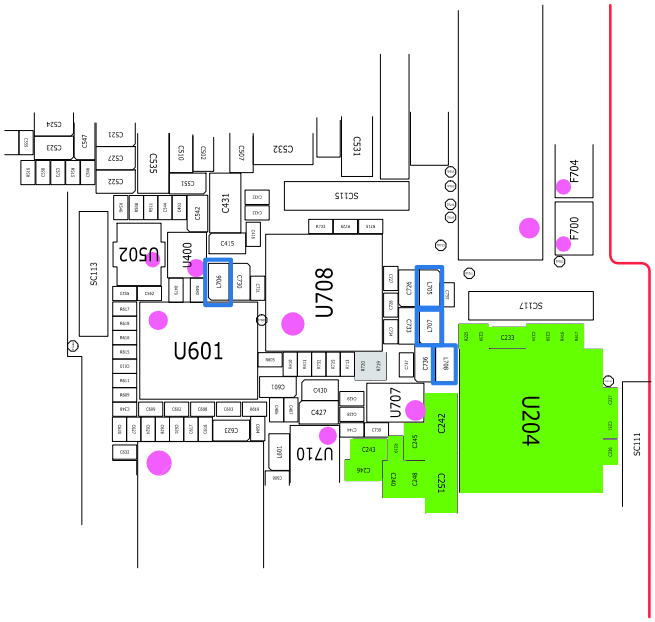
8-3-8. MHL







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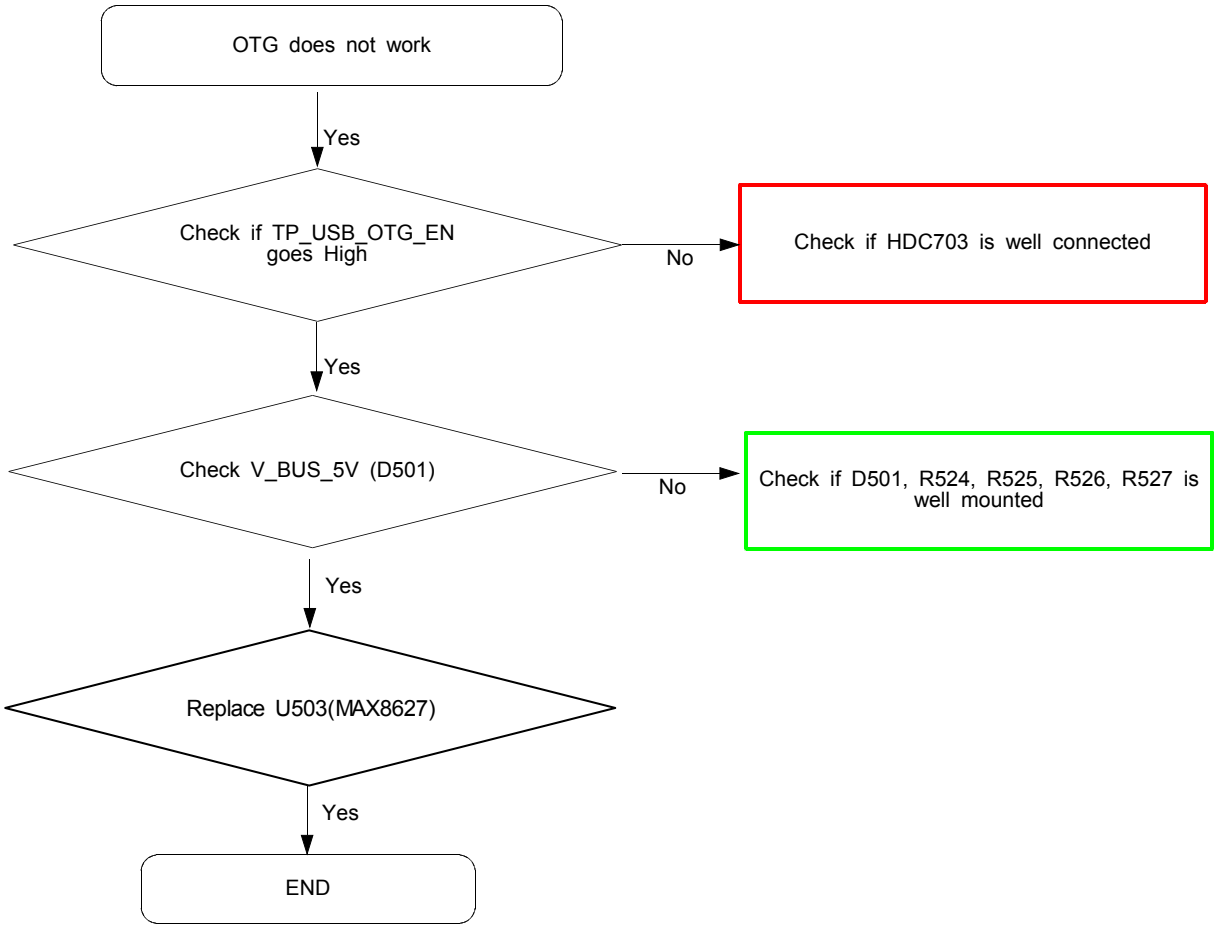
8-3-9. OTG



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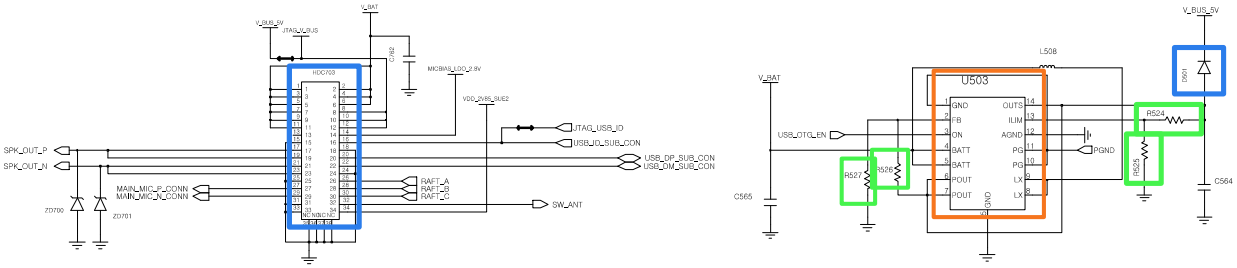
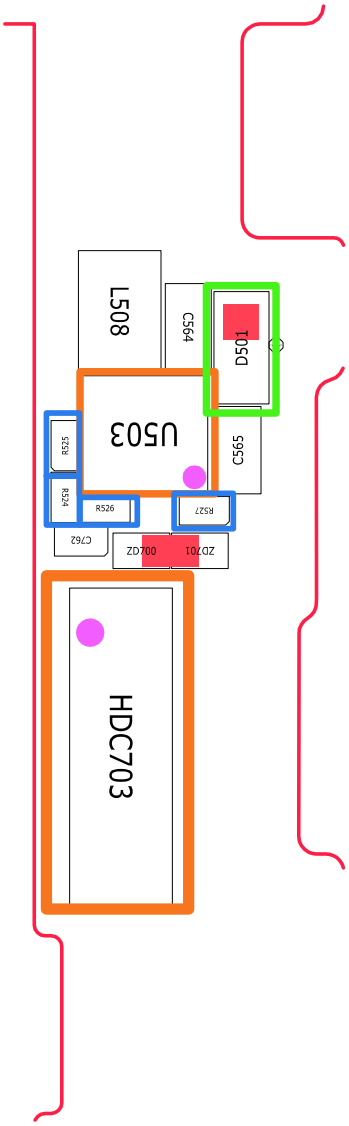
8-3-9. OTG





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8-4. Service Schematics

- NC Point(Top View)

UCP400

: **NC**

2.1 Pin Assignment Diagram

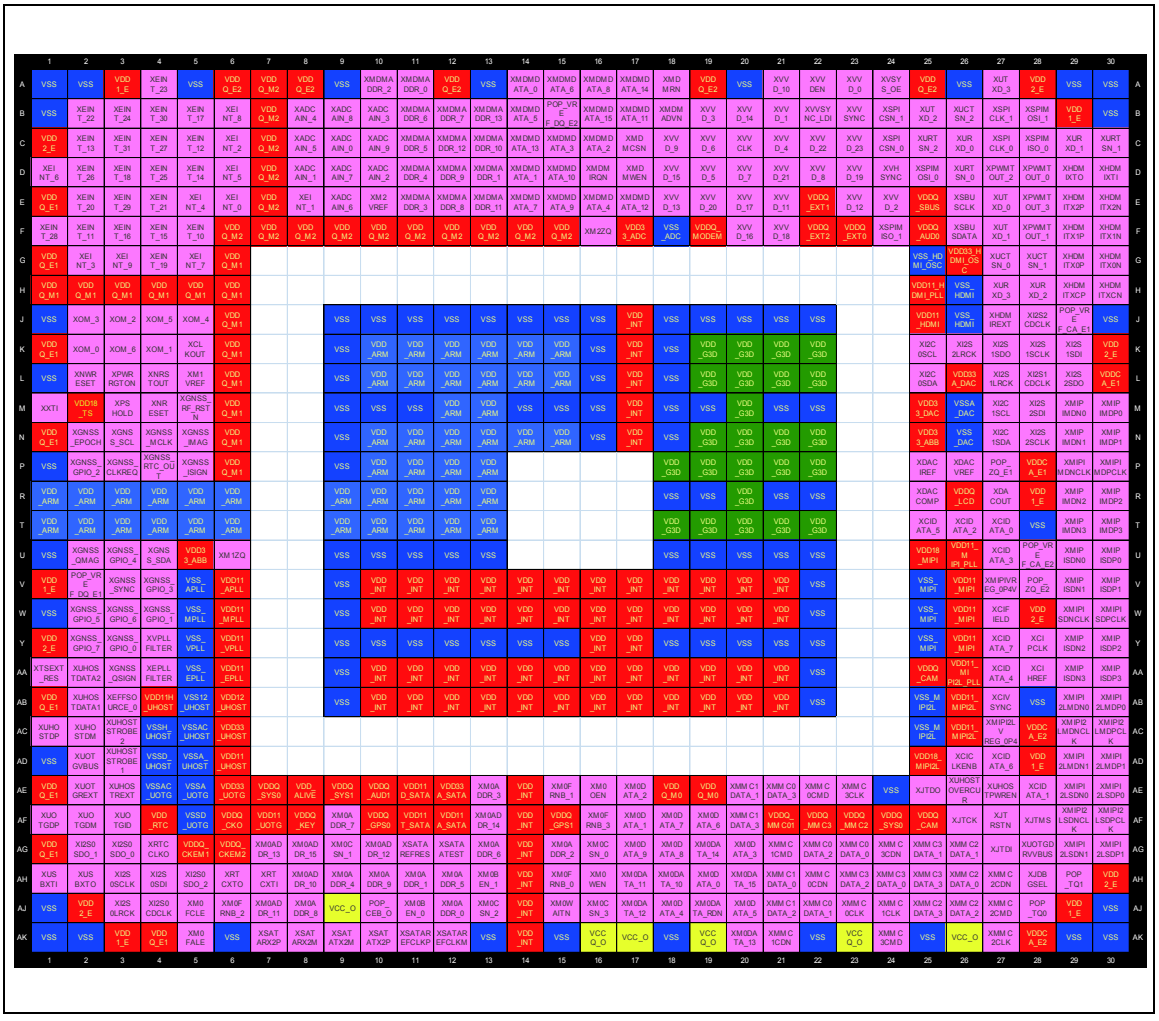

Figure 2-1 S5PC210 Pin Map(756-FCMSP) Top View

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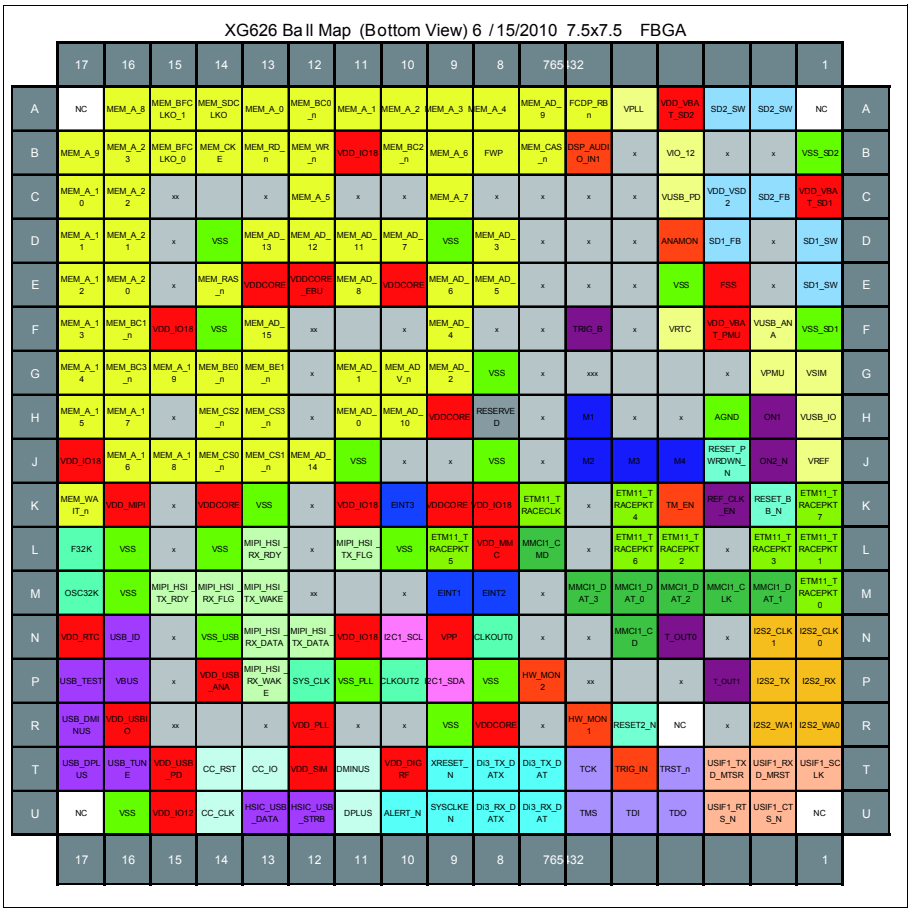
UCP300



	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
A	NC	MEM_A_8	MEM_BFCLKO_1	MEM_SDCLKO	MEM_A_0	MEM_BC0_n	MEM_A_1	MEM_A_2	MEM_A_3	MEM_A_4	MEM_AD_9	FCDP_RBn	VPLL	VDD_VBAT_SD2	SD2_SW	SD2_SW	NC	A
B	MEM_A_9	MEM_A_23	MEM_BFCLKO_0	MEM_CKE	MEM_RD_n	MEM_WR_n	VDD_IO18	MEM_BC2_n	MEM_A_6	FWP	MEM_CAS_n	DSP_AUDIO_IN1	x	VIO_12	x	x	VSS_SD2	B
C	MEM_A_10	MEM_A_22	xx		x	MEM_A_5	x	x	MEM_A_7	x	x	x	x	VUSB_PD	VDD_VSD2	SD2_FB	VDD_VBAT_SD1	C
D	MEM_A_11	MEM_A_21	x	VSS	MEM_AD_13	MEM_AD_12	MEM_AD_11	MEM_AD_7	VSS	MEM_AD_3	x	x	x	ANAMON	SD1_FB	x	SD1_SW	D
E	MEM_A_12	MEM_A_20	x	MEM_RAS_n	VDDCORE	VDDCORE_EBU	MEM_AD_8	VDDCORE	MEM_AD_6	MEM_AD_5	x	x	x	VSS	FSS	x	SD1_SW	E
F	MEM_A_13	MEM_BC1_n	VDD_IO18	VSS	MEM_AD_15	xx		x	MEM_AD_4	x	x	TRIG_B	x	VRTC	VDD_VBAT_PMU	VUSB_AN A	VSS_SD1	F
G	MEM_A_14	MEM_BC3_n	MEM_A_19	MEM_BE0_n	MEM_BE1_n	x	MEM_AD_1	MEM_AD V_n	MEM_AD_2	VSS	x	xxx			x	VPMU	VSIM	G
H	MEM_A_15	MEM_A_17	x	MEM_CS2_n	MEM_CS3_n	x	MEM_AD_0	MEM_AD_10	VDDCORE	RESERVED	x	M1	x	x	AGND	ON1	VUSB_IO	H
J	VDD_IO18	MEM_A_16	MEM_A_18	MEM_CS0_n	MEM_CS1_n	MEM_AD_14	VSS	x	x	VSS	x	M2	M3	M4	RESET_PWRDWN_N	ON2_N	VREF	J
K	MEM_WAIT_n	VDD_MIPI	x	VDDCORE	VSS	x	VDD_IO18	EINT3	VDDCORE	VDD_IO18	ETM11_TRACECLK	x	ETM11_TRACEPKT4	TM_EN	REF_CLK_EN	RESET_BB_N	ETM11_TRACEPKT7	K
L	F32K	VSS	x	VSS	MIPI_HSI_RX_RDY	x	MIPI_HSI_TX_FLG	VSS	ETM11_TRACEPKT5	VDD_MMC	MMCI1_CMD	x	ETM11_TRACEPKT6	ETM11_TRACEPKT2	x	ETM11_TRACEPKT3	ETM11_TRACEPKT1	L
M	OSC32K	VSS	MIPI_HSI_TX_RDY	MIPI_HSI_RX_FLG	MIPI_HSI_TX_WAKE	xx		x	EINT1	EINT2	x	MMCI1_DAT_3	MMCI1_DAT_0	MMCI1_DAT_2	MMCI1_CLK	MMCI1_DAT_1	ETM11_TRACEPKT0	M
N	VDD_RTC	USB_ID	x	VSS_USB	MIPI_HSI_RX_DATA	MIPI_HSI_TX_DATA	VDD_IO18	I2C1_SCL	VPP	CLKOUT0	x	x	MMCI1_CD	T_OUT0	x	I2S2_CLK1	I2S2_CLK0	N
P	USB_TEST	VBUS	x	VDD_USB_ANA	MIPI_HSI_RX_WAKE	SYS_CLK	VSS_PLL	CLKOUT2	I2C1_SDA	VSS	HW_MON2	xx		x	T_OUT1	I2S2_TX	I2S2_RX	P
R	USB_DMINUS	VDD_USBIO	xx		x	VDD_PLL	x	x	VSS	VDDCORE	x	HW_MON1	RESET2_N	NC	x	I2S2_WA1	I2S2_WA0	R
T	USB_DPLUS	USB_TUNE	VDD_USB_PD	CC_RST	CC_IO	VDD_SIM	DMINUS	VDD_DIGRF	XRESET_N	Di3_TX_DATX	Di3_TX_DAT	TCK	TRIG_IN	TRST_n	USIF1_TXD_MTSR	USIF1_RXD_MRST	USIF1_SCLK	T
U	NC	VSS	VDD_IO12	CC_CLK	HSIC_USB_DATA	HSIC_USB_STRB	DPLUS	ALERT_N	SYSCLKEN	Di3_RX_DATX	Di3_RX_DAT	TMS	TDI	TDO	USIF1_RTS_N	USIF1_CTS_N	NC	U
	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

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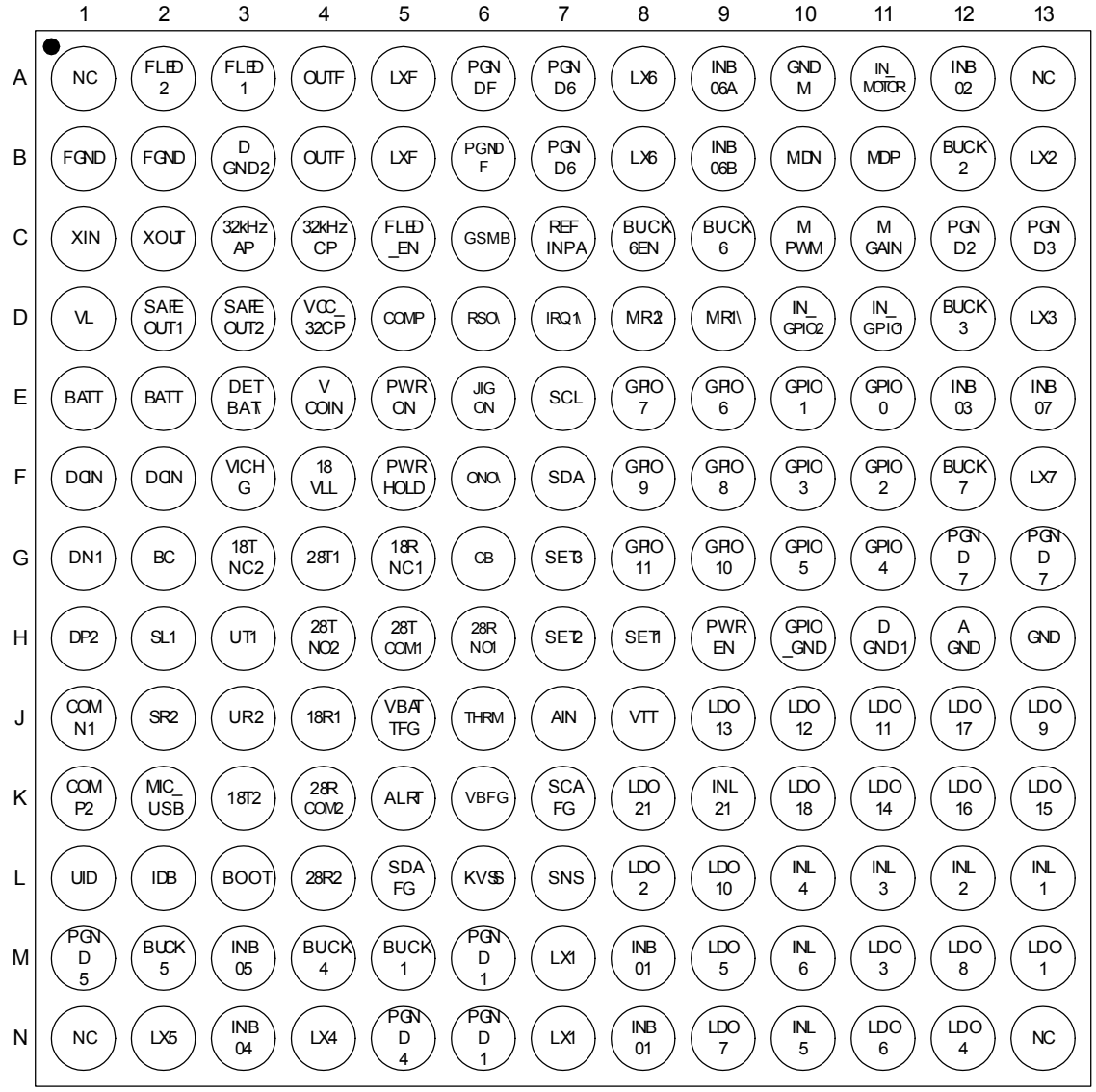
U501


1 2 3 4 5 6 7 8 9 10 11 12 13
A NC FLED2 FLED1 OUTF LXF PGNDF PGND6 LX6 INB06A GNDM IN_MOTOR INB02 NC
B FGND FGND DGND2 OUTF LXF PGNDF PGND6 LX6 INB06B MDN MDP BUCK2 LX2
C XIN XOUT 32kHzAP 32kHzCP FLED_EN GSMB REFINPA BUCK6EN BUCK6 MPWM MGAIN PGND2 PGND3
D VL SAFEOUT1 SAFEOUT2 VCC_32CP COMP RSO\ IRQ1\ MR2\ MR1\ IN_GPIO2 IN_GPIO1 BUCK3 LX3
E BATT BATT DETBAT\ VCOIN PWRON JIGON SCL GRO7 GRO6 GPIO1 GPIO0 INB03 INB07
F DCIN DCIN VICHG 18VLL PWRHOLD ONO\ SDA GRO9 GRO8 GPIO3 GPIO2 BUCK7 LX7
G DN1 BC 18TNC2 28T1 18RNC1 CB SET3 GRO11 GRO10 GPIO5 GPIO4 PGND7 PGND7
H DP2 SL1 UT1 28TNC2 28TCOM1 28RNO1 SET2 SET1 PWREN GPIO_GND DGND1 AGND GND
J COMN1 SR2 UR2 18R1 VBATTFG THRM AIN VTT LDO13 LDO12 LDO11 LDO17 LDO9
K COMP2 MIC_USB 18T2 28RCOM2 ALRT VBFG SCAFG LDO21 INL21 LDO18 LDO14 LDO16 LDO15
L UID IDB BOOT 28R2 SDAFG KVSS SNS LDO2 LDO10 INL4 INL3 INL2 INL1
M PGND5 BUCK5 INB05 BUCK4 BUCK1 PGND1 LX1 INB01 LDO5 INL6 LDO3 LDO8 LDO1
N NC LX5 INB04 LX4 PGND4 PGND1 LX1 INB01 LDO7 INL5 LDO6 LDO4 NC

TOP VIEW

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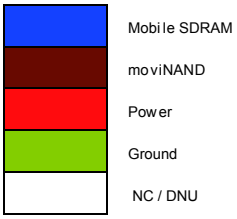
UME300

3. PIN CONFIGURATION

	1	2	3	4567				8	9	10	11	12	13	14
A				DNU		DNU			DNU		DNU			
B		DNU											DNU	
C														
D	DNU													DNU
E														
F														
G														
H	DNU	NC	DAT0m	DAT1m	DAT2m	NC	NC	VDDQd	VSSQd	VSSd	VDDd	VSSQd	NC	DNU
J	NC	DAT3m	DAT4m	DAT5m	DAT6m	DAT7m	NC	NC	NC	NC	NC	DQ15d	VDDQd	NC
K	VSSd	VDDIm	A4d	VSSQm	NC	VDDQm	NC	NC	NC	NC	NC	DQ14d	DQ13d	VDDQd
L	A5d	A6d	A7d	NC								DQ11d	DQ12d	VSSQd
M	A12d	A11d	A8d		NC	VDDm	VSSm	NC	NC	NC		DQ10d	DQ9d	DQ8d
N	VDDd	NC	A9d		VDDm					NC		UDQSd	UDMd	VSSQd
P	CKEd	/CSd	NC		VSSm					NC		CKd	VDDQd	VDDd
R	VDDQd	/RASd	/WEd		NC					VSSm		/CKd	VDDQd	VSSd
T	NC	/CASd	NC		NC					VDDm		LDQSd	LDMd	VSSQd
U	BA1d	VSSd	A10d		RSTm	NC	NC	VSSm	VDDm	NC		DQ5d	DQ6d	DQ7d
V	BA0d	A0d	A1d									DQ3d	DQ4d	VSSQd
W	VSSd	VDDd	A2d	VDDQm	CMDm	CLKm	NC	NC	NC	NC	NC	DQ1d	DQ2d	VDDQd
Y	NC	VSSQm	A3d	VDDQm	VSSQm	VSSQd	NC	NC	NC	NC	NC	DQ0d	VDDQd	NC
AA	DNU	NC	VDDQm	VSSQm	VDDQm	VSSQm	NC	VDDQd	VSSQd	NC	VDDd	VSSQd	NC	DNU
AB														
AC														
AD														
AE	DNU													DNU
AF														
AG		DNU											DNU	
AH				DNU		DNU			DNU		DNU			

169 FBGA: Top View (Ball Down)



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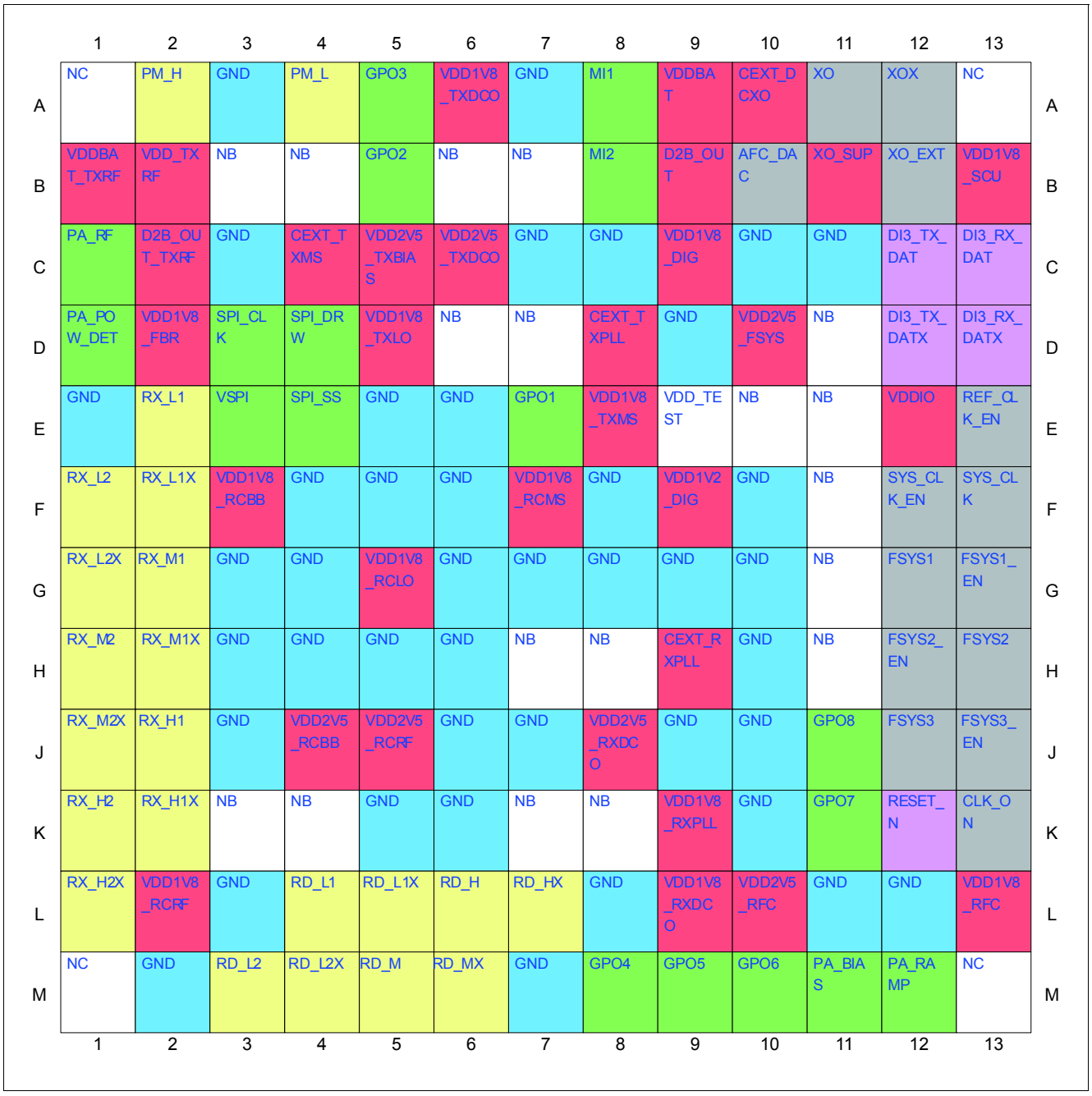
U100



	1	2	3	4	5	6	7	8	9	10	11	12	13
A	NC	PM_H	GND	PM_L	GPO3	VDD1V8_TXDCO	GND	MI1	VDDBAT	CEXT_DCXO	XO	XOX	NC
B	VDDBAT_TXRF	VDD_TXRF	NB	NB	GPO2	NB	NB	MI2	D2B_OUT	AFC_DAC	XO_SUP	XO_EXT	VDD1V8_SCU
C	PA_RF	D2B_OUT_TXRF	GND	CEXT_TXMS	VDD2V5_TXBIAS	VDD2V5_TXDCO	GND	GND	VDD1V8_DIG	GND	GND	DI3_TX_DAT	DI3_RX_DAT
D	PA_POW_DET	VDD1V8_FBR	SPI_CLK	SPI_DRW	VDD1V8_TXLO	NB	NB	CEXT_TXPLL	GND	VDD2V5_FSYS	NB	DI3_TX_DATX	DI3_RX_DATX
E	GND	RX_L1	VSPI	SPI_SS	GND	GND	GPO1	VDD1V8_TXMS	VDD_TEST	NB	NB	VDDIO	REF_CLK_EN
F	RX_L2	RX_L1X	VDD1V8_RCBB	GND	GND	GND	VDD1V8_RCMS	GND	VDD1V2_DIG	GND	NB	SYS_CLK_EN	SYS_CLK
G	RX_L2X	RX_M1	GND	GND	VDD1V8_RCLO	GND	GND	GND	GND	GND	NB	FSYS1	FSYS1_EN
H	RX_M2	RX_M1X	GND	GND	GND	GND	NB	NB	CEXT_RXPLL	GND	NB	FSYS2_EN	FSYS2
J	RX_M2X	RX_H1	GND	VDD2V5_RCBB	VDD2V5_RCRF	GND	GND	VDD2V5_RXDCO	GND	GND	GPO8	FSYS3	FSYS3_EN
K	RX_H2	RX_H1X	NB	NB	GND	GND	NB	NB	VDD1V8_RXPLL	GND	GPO7	RESET_N	CLK_ON
L	RX_H2X	VDD1V8_RCRF	GND	RD_L1	RD_L1X	RD_H	RD_HX	GND	VDD1V8_RXDCO	VDD2V5_RFC	GND	GND	VDD1V8_RFC
M	NC	GND	RD_L2	RD_L2X	RD_M	RD_MX	GND	GPO4	GPO5	GPO6	PA_BIAS	PA_RAMP	NC

Figure 2 Ball Diagram PG-WFWLB- 138- 2 (Top View)

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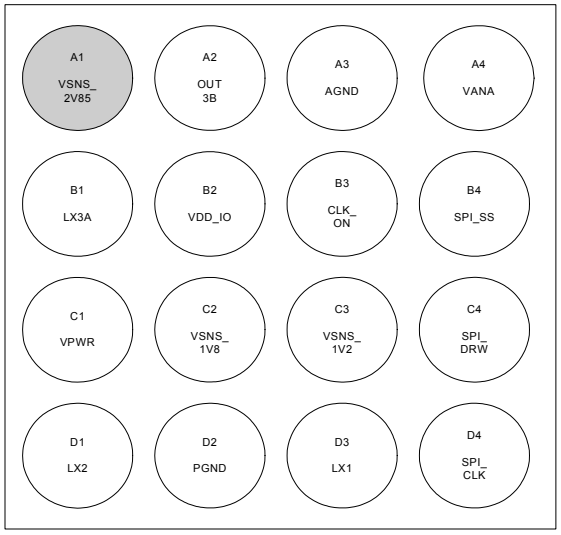
U103

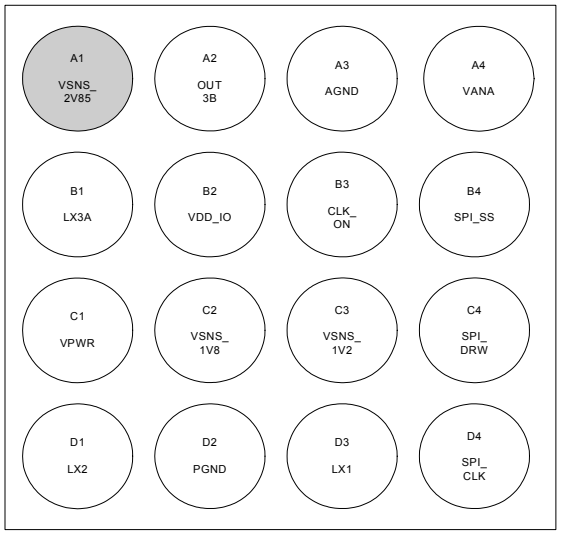
Pin Out



Bumps Down

U104

Pin Out



Bumps Down

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U708

	1	2	3	4	5	6	7
A	RSVDL	VDDQ	MHL_D	MHL_DB	NC	NC	CBUS_ID
B	RSVDL	RSVDL	RSVDL	GND	AVCC33	USB_ID	RSVDL
C	CSCL	RSVDL	WAKE_UP	AVCC12	GND	V_SENSE	INT
D	CSDA	RSVDL	GND	IOVCC18	CVCC12	CI2CA	RESET_N
E	DSDA	GND	IOVCC18	CVCC12	AVCC33	AVCC12	GND
F	RX2_P	GND	RPWR	DSCL	AVCC12	GND	HPD
G	RX2_N	RX1_P	RX1_N	RX0_P	RX0_N	RXC_P	RXC_N

Figure 2. Ball Diagram (Top View)

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U601

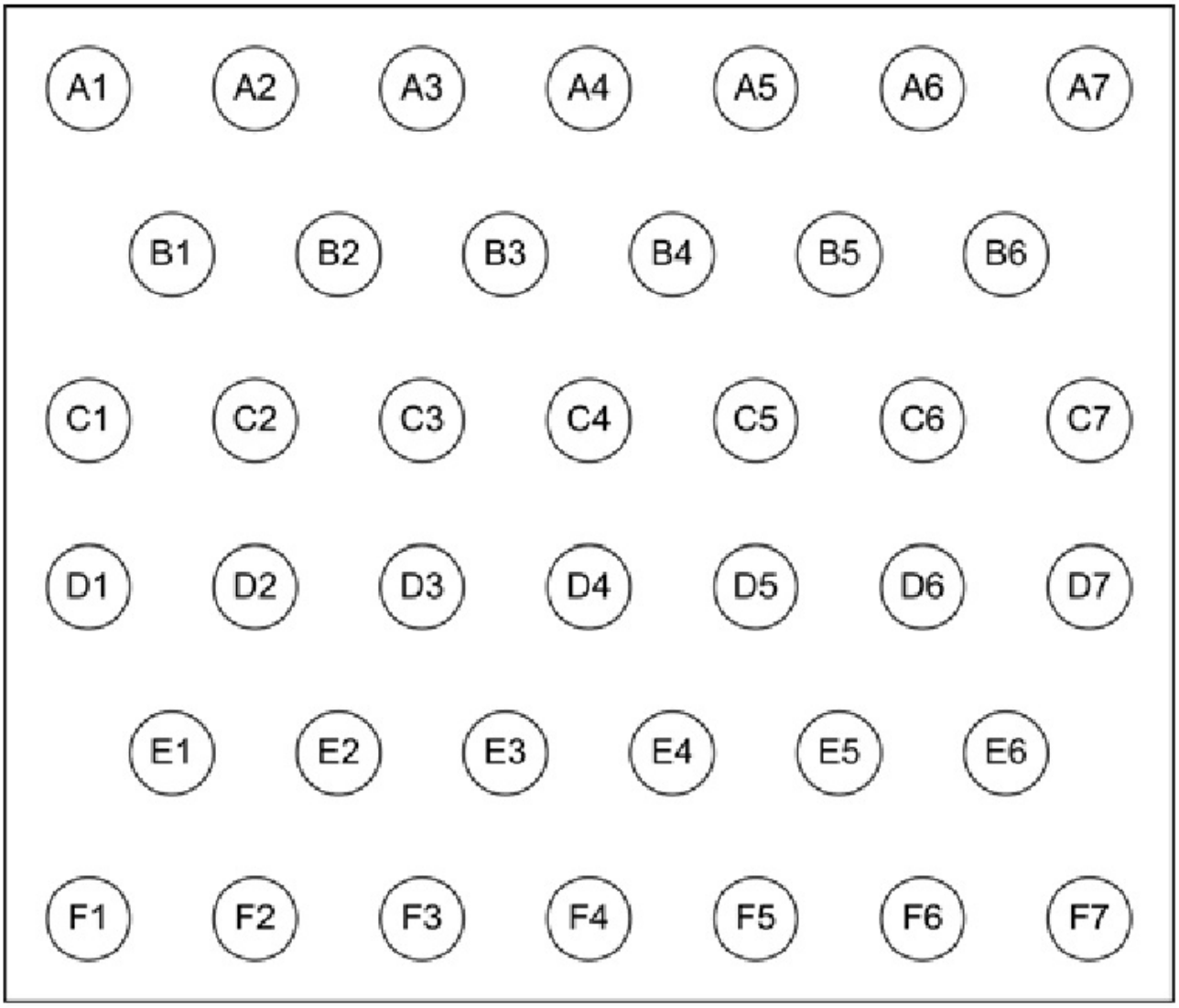

Figure 6 A1026 Ball Assignments (Top View)

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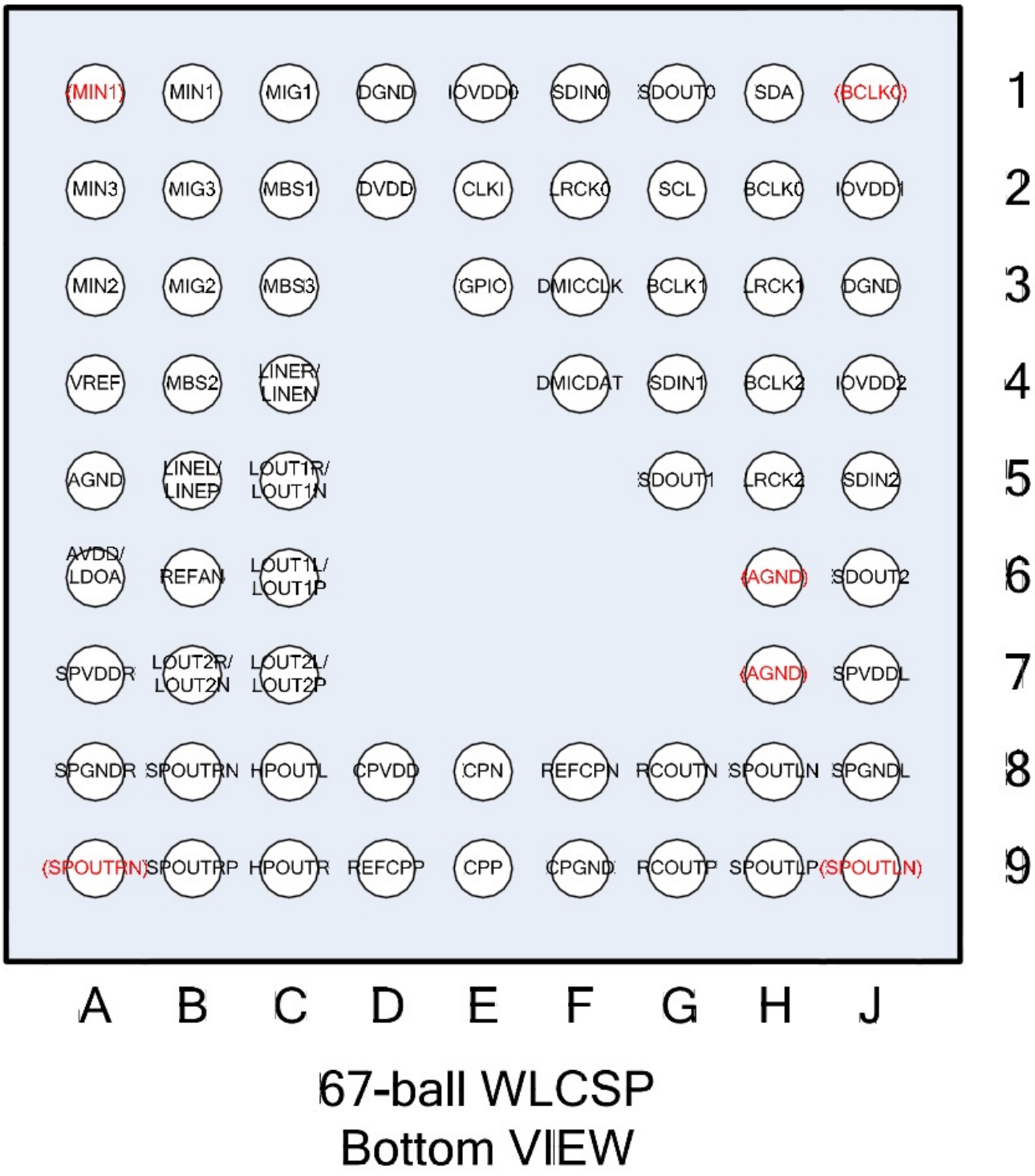
U602


(MIN1) MIN1 MIG1 DGND IOVDD0 SDIN0 SDOUT0 SDA (BCLK0) 1
MIN3 MIG3 MBS1 DVDD CLKI LRCK0 SCL BCLK0 IOVDD1 2
MIN2 MIG2 MBS3 GPIO DMICCLK BCLK1 LRCK1 DGND 3
VREF MBS2 LINER/ LINEN DMICDAT SDIN1 BCLK2 IOVDD2 4
AGND LINEL/ LINEP LOUT1R/ LOUT1N SDOUT1 LRCK2 SDIN2 5
AVDD/ LDOA REFAN LOUT1L/ LOUT1P (AGND) SDOUT2 6
SPVDDR LOUT2R/ LOUT2N LOUT2L/ LOUT2P (AGND) SPVDDL 7
SPGNDR SPOUTRN HPOUTL CPVDD CPN REFCPN RCOUTN SPOUTLN SPGNDL 8
(SPOUTRN) SPOUTRP HPOUTR REFCPP CPP CPGND RCOUTP SPOUTLP (SPOUTLN) 9
A B C D E F G H J

67-ball WLCSP
Bottom VIEW

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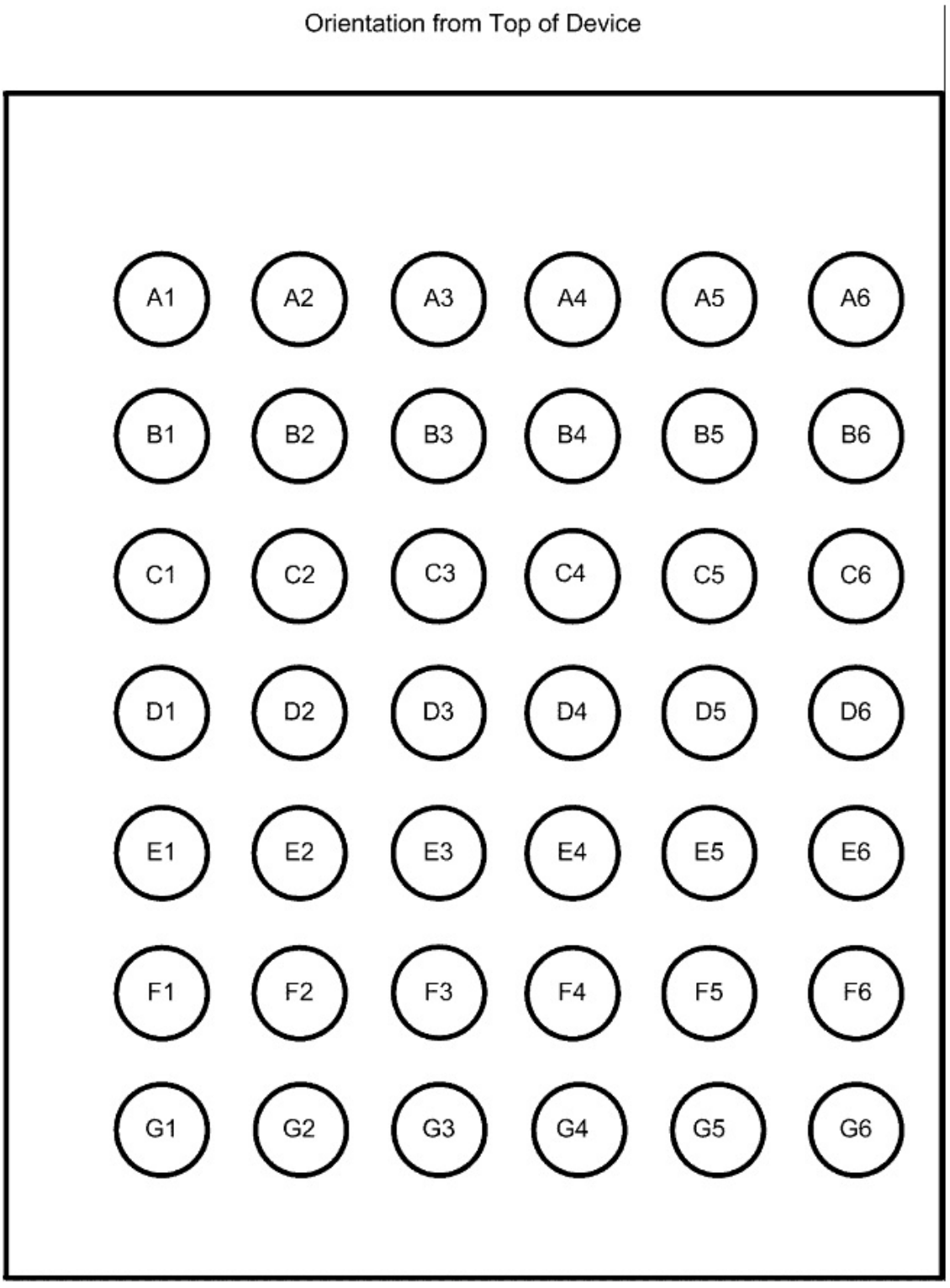
U202



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